

Silicon NPN Power Transistors

BDX65

DESCRIPTION

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- With TO-3 package
- DARLINGTON
- Complement to type BDX64

APPLICATIONS

- Designed for power amplification and switching applications.

PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

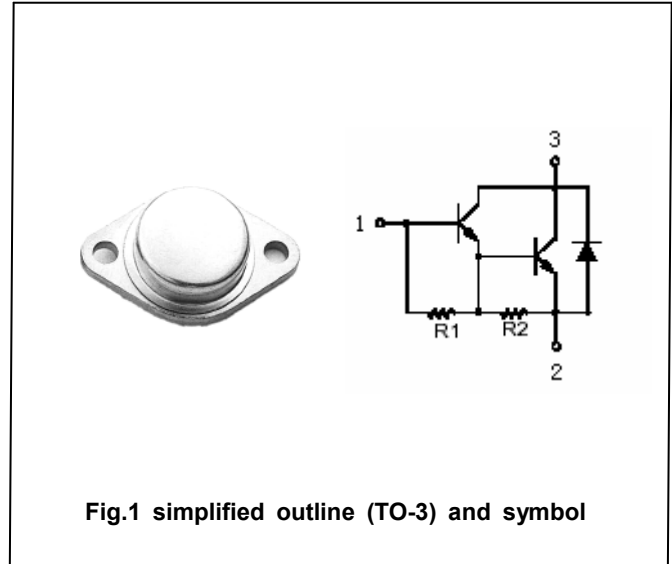


Fig.1 simplified outline (TO-3) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	80	V
V_{CEO}	Collector-emitter voltage	Open base	60	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

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 $T_j=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	$I_C=0.1\text{A}; I_B=0; L=25\text{mH}$	60			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=5\text{A}; I_B=20\text{mA}$			2	V
V_{BE}	Base-emitter voltage	$I_C=5\text{A}; V_{CE}=3\text{V}$			3	V
I_{CBO}	Collector cut-off current	$V_{CB}=60\text{V}; I_E=0$ $T_C=150^\circ\text{C}$			0.4 3	mA
I_{CEO}	Collector cut-off current	$V_{CE}=30\text{V}; I_B=0$			1	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=5\text{V}; I_C=0$			5	mA
V_F	Diode forward voltage	$I_F=3\text{A}$		1.8		V
h_{FE-1}	DC current gain	$I_C=1\text{A}; V_{CE}=3\text{V}$		1500		
h_{FE-2}	DC current gain	$I_C=5\text{A}; V_{CE}=3\text{V}$	1000			
h_{FE-3}	DC current gain	$I_C=10\text{A}; V_{CE}=3\text{V}$		1500		
f_T	Transition frequency	$I_C=5\text{A}; V_{CE}=3\text{V}; f=1\text{MHz}$		7		MHz

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PACKAGE OUTLINE

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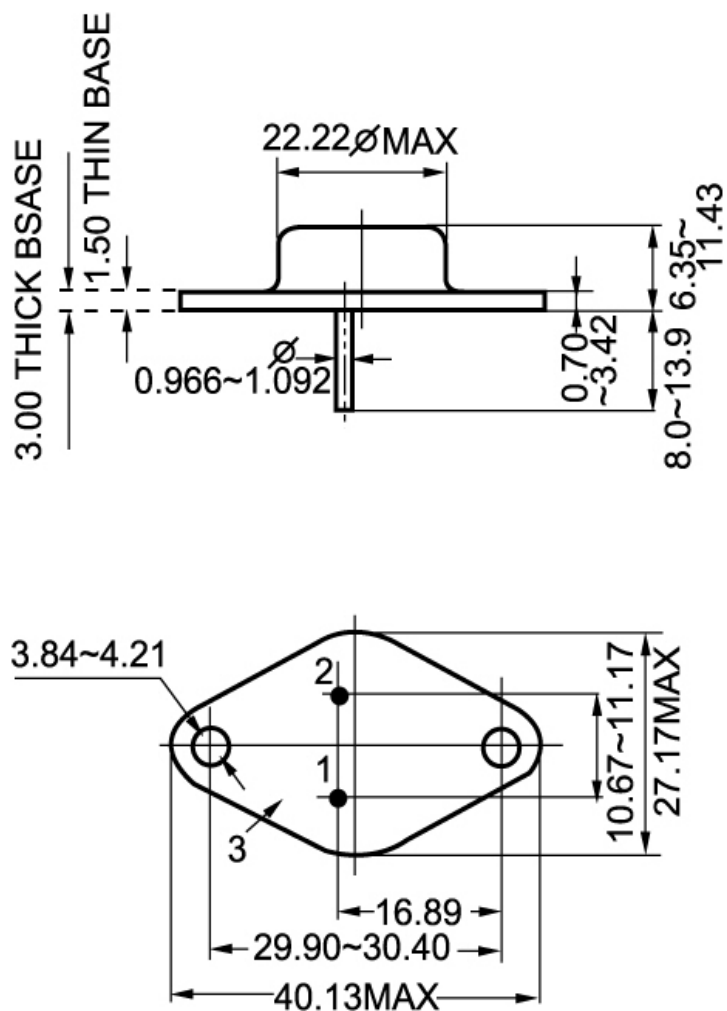


Fig.2 Outline dimensions