

Silicon NPN Power Transistors

BDY57 BDY58

DESCRIPTION

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- With TO-3 package
- High current capability
- Fast switching speed

APPLICATIONS

- For use in low frequency large signal power amplifications

PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

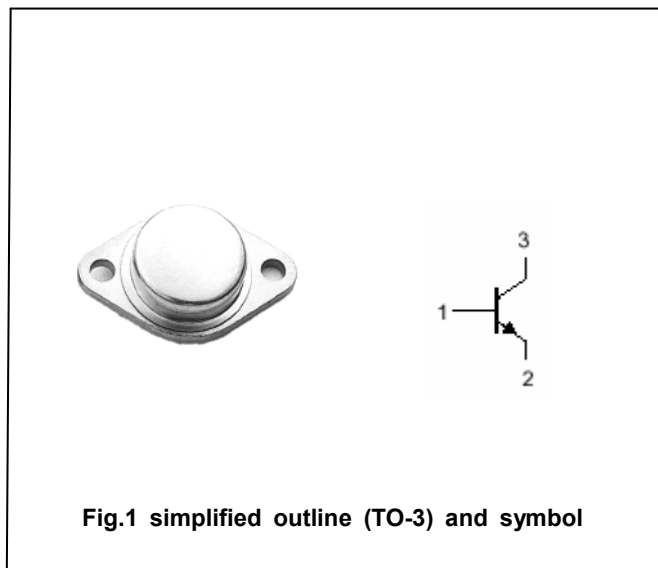


Fig.1 simplified outline (TO-3) and symbol

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

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BDY57	Open emitter	120	V
		BDY58		160	
V_{CEO}	Collector-emitter voltage	BDY57	Open base	80	V
		BDY58		125	
V_{EBO}	Emitter-base voltage		Open collector	10	V
I_C	Collector current			25	A
I_B	Base current			6	A
P_T	Total power dissipation		$T_C=25^\circ\text{C}$	175	W
T_j	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	1.0	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

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SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-emitter sustaining voltage	BDY57	I _C =0.1A ; I _B =0	80			V
		BDY58		125			
V _{(BR)CBO}	Collector-emitter breakdown voltage	BDY57	I _C =5mA ; I _E =0	120			V
		BDY58		160			
V _{CEsat}	Collector-emitter saturation voltage		I _C =10A ; I _B =1A			1.4	V
V _{BEsat}	Base-emitter saturation voltage		I _C =10A ; I _B =1A			1.4	V
I _{CBO}	Collector cut-off current		V _{CB} =100V ; I _E =0			0.5	mA
I _{CER}	Collector cut-off current		V _{CE} =80V ; R _{BE} =10Ω ; T _C =100°C			10	mA
I _{EBO}	Emitter cut-off current		V _{EB} =10V ; I _C =0			0.5	mA
h _{FE-1}	DC current gain		I _C =10A ; V _{CE} =4V	20		60	
h _{FE-2}	DC current gain		I _C =20A ; V _{CE} =4V		15		
f _T	Transition frequency		I _C =1A ; V _{CE} =15V, f=10MHz	10			MHz
t _{on}	Turn-on time		I _C =15A ; I _B =1.5A			1.0	μs

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PACKAGE OUTLINE

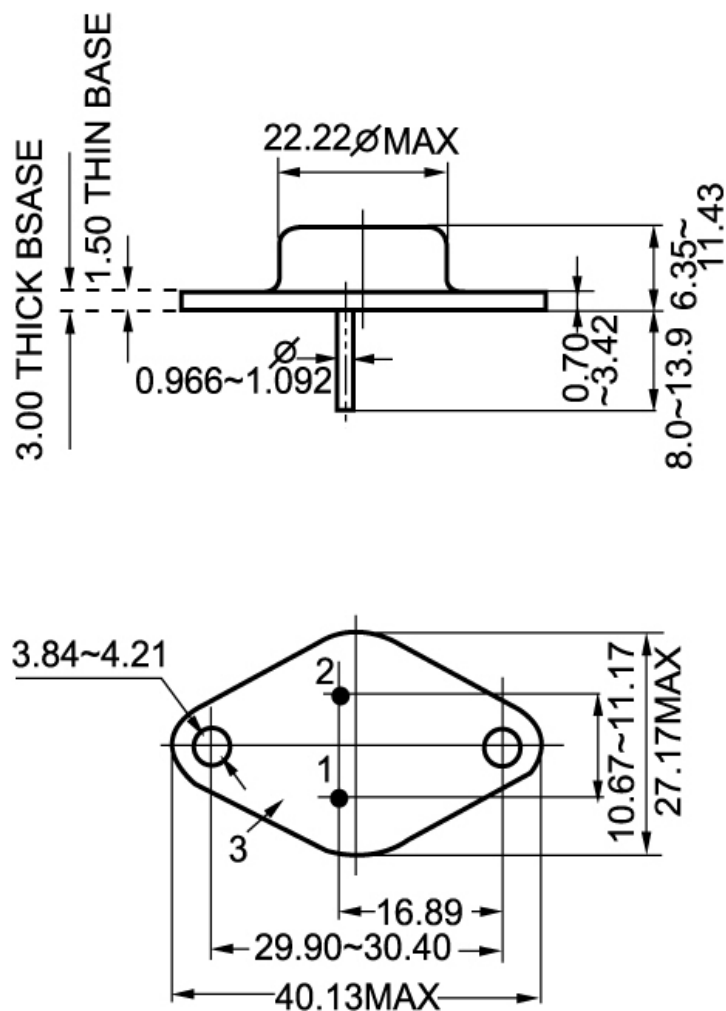
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Fig.2 Outline dimensions