

Silicon PNP Power Transistors

BDX78

DESCRIPTION

- With TO-220C package
- Complement to type BDX77

APPLICATIONS

- Medium power switching
- Amplifier

PINNING

PIN	DESCRIPTION
1	Emitter
2	Collector;connected to mounting base
3	Base

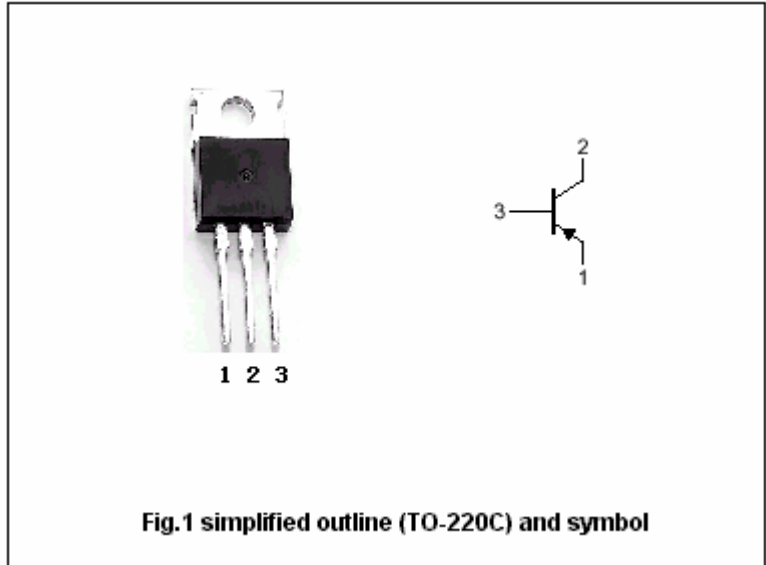


Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-100	V
V_{CEO}	Collector-emitter voltage	Open base	-80	V
V_{EBO}	Emitter-base voltage	Open collector	-5	V
I_C	Collector current (DC)		-8	A
I_{CM}	Collector current-Peak $t_p=10ms$		-12	A
I_B	Base current		-3	A
P_{tot}	Total power dissipation	$T_{mb}=25$	60	W
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-65~150	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-a}$	Thermal resistance from junction to ambient	70	K/W

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =-0.2A; I _B =0	-80			V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =-1mA; I _E =0	-100			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =-1mA; I _C =0	-5			V
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =-3A; I _B =-0.3A			-1.0	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =-6A; I _B =-0.6A			-1.5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =-6A; I _B =-0.6A			-2.0	V
V _{BE}	Base-emitter on voltage	I _C =-3A ; V _{CE} =-2V			-1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =-40V; I _E =0			-0.1	mA
I _{CEO}	Collector cut-off current	V _{CE} =-30V; I _B =0			-0.2	mA
I _{EBO}	Emitter cut-off current	V _{EB} =-5V; I _C =0			-0.5	mA
f _T	Transition frequency	I _C =-0.3A ; V _{CE} =-3V	7			MHz
h _{FE}	DC current gain	I _C =-1A ; V _{CE} =-2V	30			

Switching times

t _{on}	Turn-on time	I _C =2A I _{B1} =-I _{B2} =0.2A			1.0	μs
t _{off}	Turn-off time				2.0	μs

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PACKAGE OUTLINE

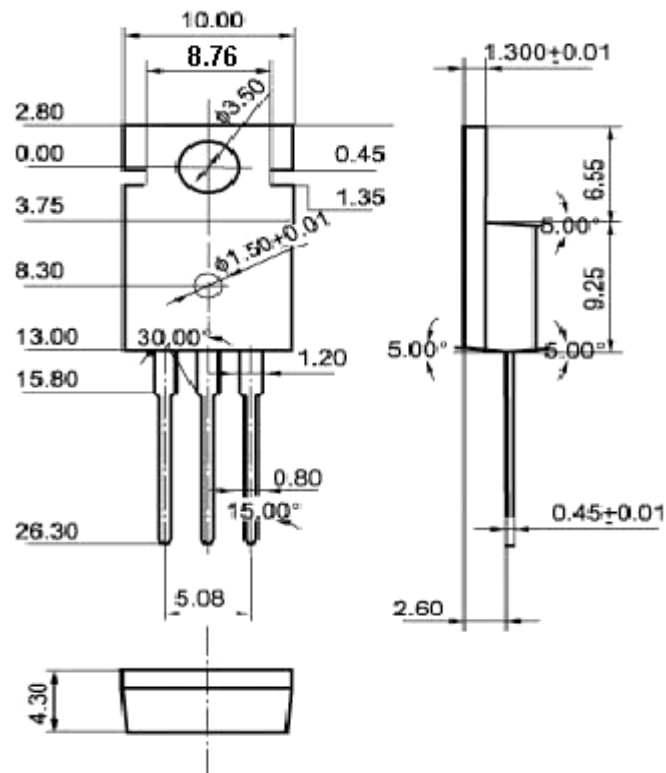


Fig.2 Outline dimensions