

Silicon PNP Power Transistors

BDX54/A/B/C

DESCRIPTION

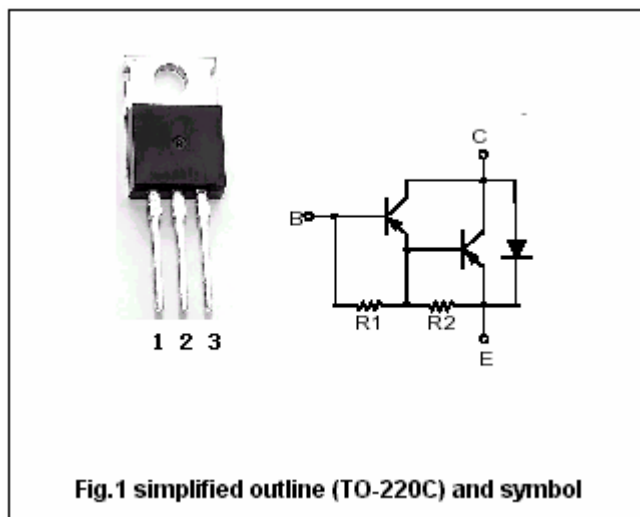
- With TO-220C package
- High DC current gain
- DARLINGTON
- Complement to type BDX53/A/B/C

APPLICATIONS

- Power linear and switching applications
- Hammer drivers, audio amplifiers

PINNING

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

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

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BDX54	Open emitter	-45	V
		BDX54A		-60	
		BDX54B		-80	
		BDX54C		-100	
V_{CEO}	Collector-emitter voltage	BDX54	Open base	-45	V
		BDX54A		-60	
		BDX54B		-80	
		BDX54C		-100	
V_{EBO}	Emitter-base voltage		Open collector	-5	V
I_C	Collector current-DC			-8	A
I_{CM}	Collector current-Pulse			-12	A
I_B	Base current			-0.2	A
P_C	Collector power dissipation		$T_C=25^\circ\text{C}$	60	W
T_j	Junction temperature			150	$^\circ\text{C}$
T_{stg}	Storage temperature			-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	2.08	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	BDX54	$I_C = -0.1A, I_B = 0$	-45			V
		BDX54A		-60			
		BDX54B		-80			
		BDX54C		-100			
V_{CEsat}	Collector-emitter saturation voltage		$I_C = -3A, I_B = -12mA$			-2.0	V
$V_{BE sat}$	Base-emitter saturation voltage		$I_C = -3A, I_B = -12mA$			-2.5	V
I_{CBO}	Collector cut-off current	BDX54	$V_{CB} = -45V, I_E = 0$			-0.2	mA
		BDX54A	$V_{CB} = -60V, I_E = 0$				
		BDX54B	$V_{CB} = -80V, I_E = 0$				
		BDX54C	$V_{CB} = -100V, I_E = 0$				
I_{CEO}	Collector cut-off current	BDX54	$V_{CE} = -22V, I_B = 0$			-0.5	mA
		BDX54A	$V_{CE} = -30V, I_B = 0$				
		BDX54B	$V_{CE} = -40V, I_B = 0$				
		BDX54C	$V_{CE} = -50V, I_B = 0$				
I_{EBO}	Emitter cut-off current		$V_{EB} = -5V, I_C = 0$			-2	mA
h_{FE}	DC current gain		$I_C = -3A; V_{CE} = -3V$	750			
V_{F-1}	Forward diode voltage		$I_F = -3A$		-1.8	-2.5	V
V_{F-2}	Forward diode voltage		$I_F = -8A$		-2.5		V

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PACKAGE OUTLINE

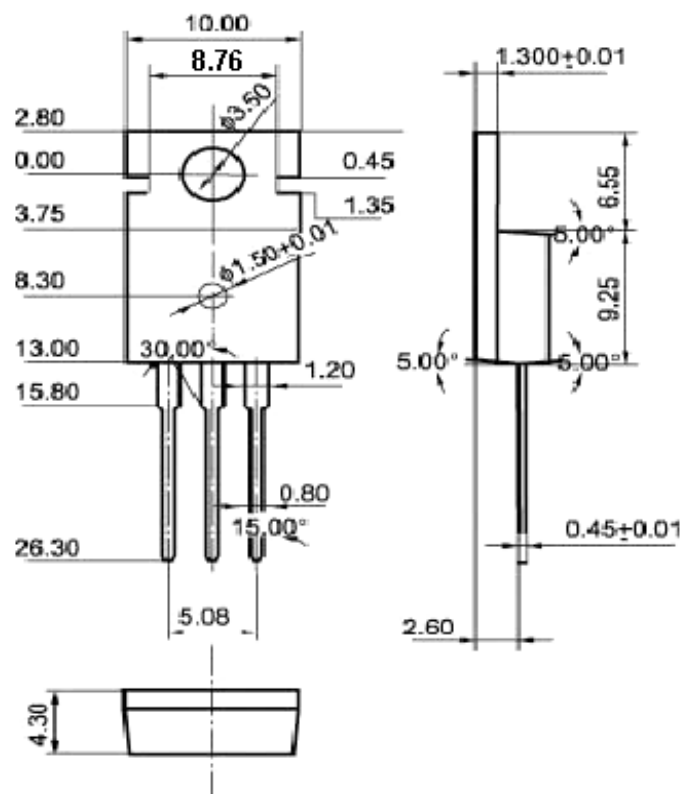


Fig.2 Outline dimensions