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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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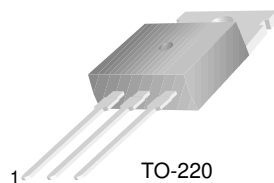
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



BDX53/A/B/C

Hammer Drivers, Audio Amplifiers Applications Power Liner and Switching Applications

- Power Darlington TR
- Complement to BDX54, BDX54A, BDX54B and BDX54C respectively



1.Base 2.Collector 3.Emmitter

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage : BDX53	45	V
	: BDX53A	60	V
	: BDX53B	80	V
	: BDX53C	100	V
V_{CEO}	Collector-Emitter Voltage : BDX53	45	V
	: BDX53A	60	V
	: BDX53B	80	V
	: BDX53C	100	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current (DC)	8	A
I_{CP}	*Collector Current (Pulse)	12	A
I_B	Base Current	0.2	A
P_C	Collector Dissipation ($T_C=25^\circ\text{C}$)	60	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	- 65 ~ 150	$^\circ\text{C}$

Electrical Characteristics $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$V_{CEO(sus)}$	* Collector-Emitter Sustaining Voltage	$I_C = 100\text{mA}, I_B = 0$	45			V
	: BDX53A		60			V
	: BDX53B		80			V
	: BDX53C		100			V
I_{CBO}	Collector Cut-off Current : BDX53	$V_{CB} = 45\text{V}, I_E = 0$			200	μA
	: BDX53A	$V_{CB} = 60\text{V}, I_E = 0$			200	μA
	: BDX53B	$V_{CB} = 80\text{V}, I_E = 0$			200	μA
	: BDX53C	$V_{CB} = 100\text{V}, I_E = 0$			200	μA
I_{CEO}	Collector Cut-off Current : BDX53	$V_{CE} = 22\text{V}, I_B = 0$			500	μA
	: BDX53A	$V_{CE} = 30\text{V}, I_B = 0$			500	μA
	: BDX53B	$V_{CE} = 40\text{V}, I_B = 0$			500	μA
	: BDX53C	$V_{CE} = 50\text{V}, I_B = 0$			500	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 5\text{V}, I_C = 0$			2	mA
h_{FE}	* DC Current Gain	$V_{CE} = 3\text{V}, I_C = 3\text{A}$	750			
$V_{CE(sat)}$	* Collector-Emitter Saturation Voltage	$I_C = 3\text{A}, I_B = 12\text{mA}$			2	V
$V_{BE(sat)}$	* Base-Emitter Saturation Voltage	$I_C = 3\text{A}, I_B = 12\text{mA}$			2.5	V
V_F	* Parallel Diode Forward Voltage	$I_F = 3\text{A}$		1.8	2.5	V
		$I_F = 8\text{A}$		2.5		V

* Pulse Test: PW=300 μs , duty Cycle =1.5% Pulsed

Typical Characteristics

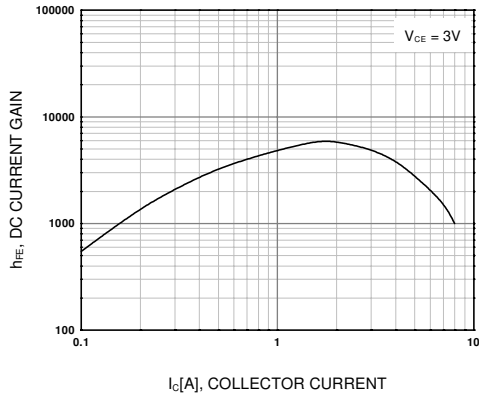


Figure 1. DC current Gain

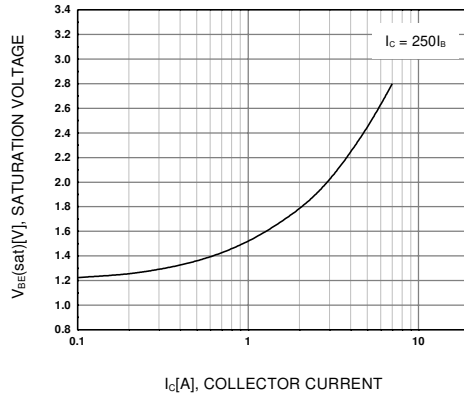


Figure 2. Base-Emitter Saturation Voltage

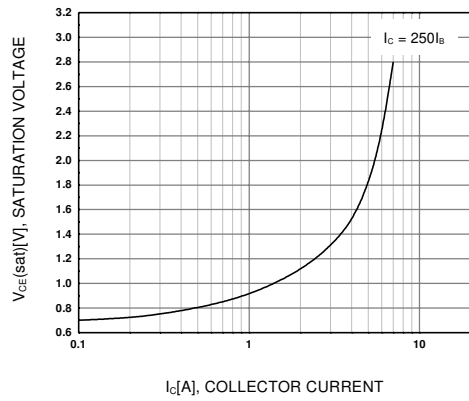


Figure 3. Collector-Emitter Saturation Voltage

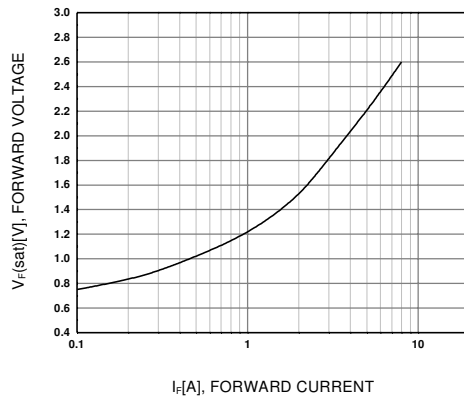


Figure 4. Damper Diode Forward Voltage

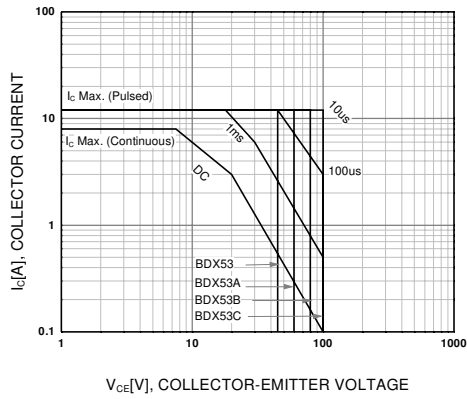


Figure 5. Safe Operating Area

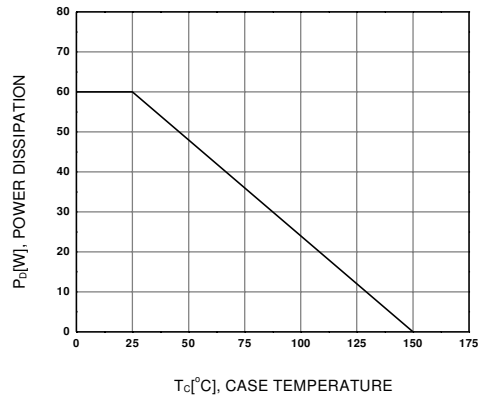
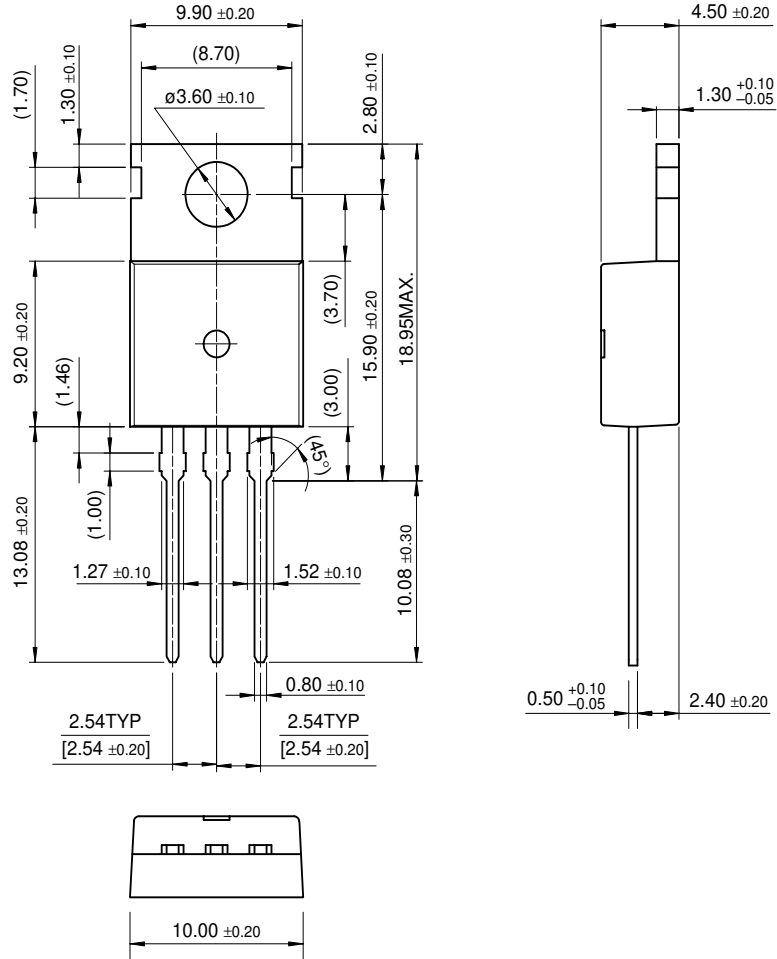


Figure 6. Power Derating

Package Dimensions

TO-220



Dimensions in Millimeters

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