# FAIRCHILD

SEMICONDUCTOR TM

### 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

## NPN Epitaxial Silicon Transistor



1.Base 2.Collector 3.Emitter

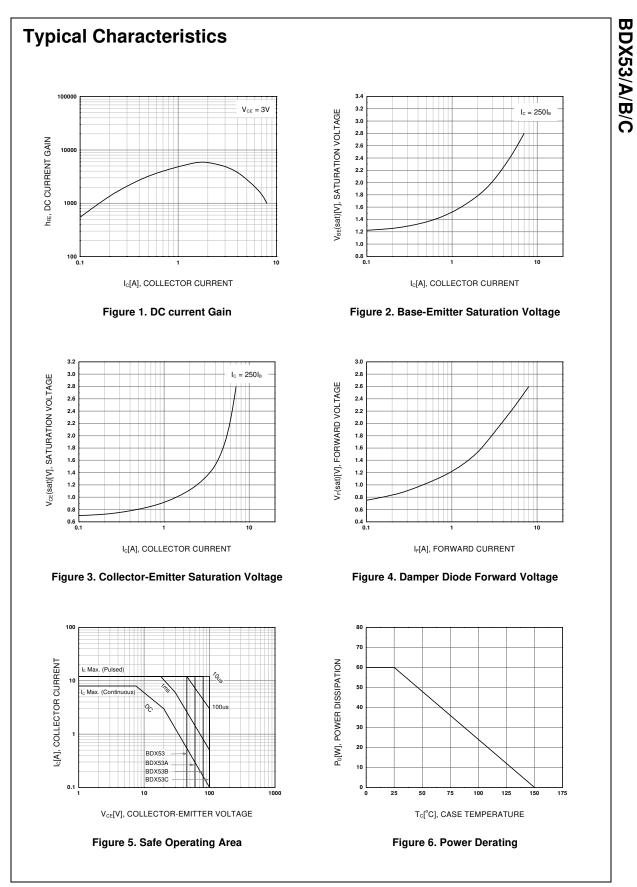
Absolute Maximum Ratings T<sub>C</sub>=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V <sub>CBO</sub>	Collector-Base Voltage : BDX53	45	V
020	: BDX53A	60	V
	: BDX53B	80	V
	: BDX53C	100	V
V <sub>CEO</sub>	Collector-Emitter Voltage : BDX53	45	V
	: BDX53A	60	V
	: BDX53B	80	V
	: BDX53C	100	V
V <sub>EBO</sub>	Emitter-Base Voltage	5	V
I <sub>C</sub>	Collector Current (DC)	8	Α
I <sub>CP</sub>	*Collector Current (Pulse)	12	Α
I <sub>B</sub>	Base Current	0.2	Α
I <sub>B</sub> P <sub>C</sub>	Collector Dissipation (T <sub>C</sub> =25°C)	60	W
TJ	Junction Temperature	150	°C
T <sub>STG</sub>	Storage Temperature	- 65 ~ 150	°C

Electrical Characteristics T<sub>C</sub>=25°C unless otherwise noted

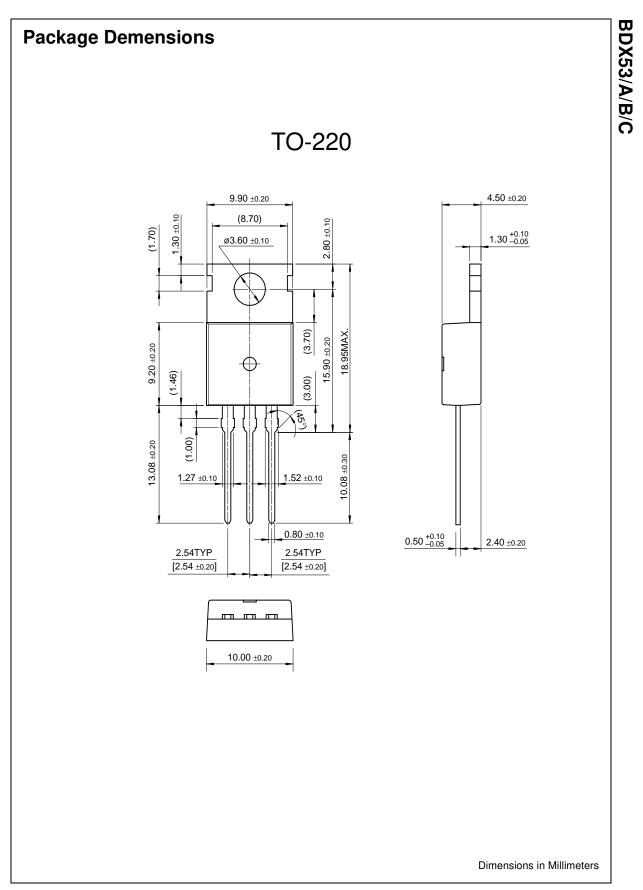
Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
V <sub>CEO</sub> (sus)	* Collector-Emitter Sustaining Voltage					
	: BDX53	I <sub>C</sub> = 100mA, I <sub>B</sub> = 0	45			V
	: BDX53A		60			V
	: BDX53B		80			V
	: BDX53C		100			V
I <sub>CBO</sub>	Collector Cut-off Current : BDX53	V <sub>CB</sub>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

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