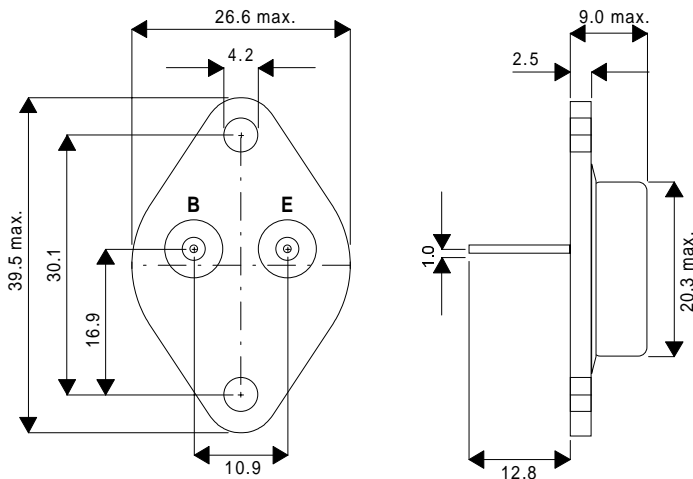


MECHANICAL DATA
 Dimensions in mm

**NPN EPITAXIAL BASE
 DARLINGTON POWER
 TRANSISTOR**



NPN epitaxial base transistors in monolithic Darlington circuit for audio output stages and general amplifier and switching applications.

**PNP complements are:
 BDX66, BDX66A, BDX66B, BDX66C.**

TO3 Package.
 Case connected to collector.

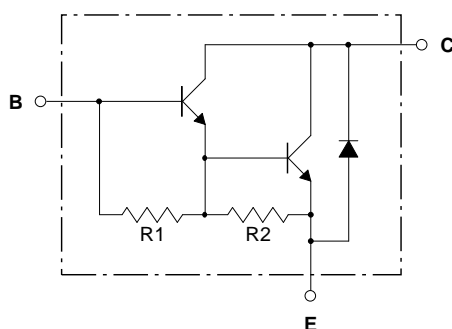
ABSOLUTE MAXIMUM RATINGS ($T_{case}=25^{\circ}C$ unless otherwise stated)

		BDX 67	BDX 67A	BDX 67B	BDX 67C	
V_{CEO}	Collector - emitter voltage (open base)	60	80	100	120	V
V_{CBO}	Collector - base voltage (open emitter)	80	100	120	140	V
V_{EBO}	Emitter - base voltage (open collector)	5	5	5	5	V
I_C	Collector current	16				A
I_{CM}	Collector current (peak)	20				A
I_B	Base current	250				mA
P_{tot}	Total power dissipation at $T_{mb}=25^{\circ}C$	150				W
T_j	Maximum junction temperature	200				$^{\circ}C$
T_{stj}	Storage junction temperature	-65 to +200				$^{\circ}C$
$R_{th\ j-mb}$	Thermal resistance, junction to mounting base.	1.17				K/W

ELECTRICAL CHARACTERISTICS ($T_j = 25^\circ\text{C}$, unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit.
I_{CBO} Collector cut-off current	$I_E = 0, V_{CB} = V_{CEOmax}$ $I_E = 0, V_{CB} = \frac{1}{2}V_{CBOmax}, T_j = 200^\circ\text{C}$			1 5	mA
I_{CEO} Collector cut-off current	$I_B = 0, V_{CE} = \frac{1}{2}V_{CEOmax}$			1	mA
I_{EBO} Emitter cut-off current	$I_C = 0, V_{EB} = 5\text{V}$			5	mA
h_{FE} D.C. current gain (note 1)	$I_C = 1\text{A}, V_{CE} = 3\text{V}$		5200		
	$I_C = 10\text{A}, V_{CE} = 3\text{V}$	1000			
	$I_C = 16\text{A}, V_{CE} = 3\text{V}$		4000		
V_{BE} Base - emitter voltage (note 1)	$I_C = 10\text{A}, V_{CE} = 3\text{V}$			2.5	V
V_{CEsat} Collector - emitter saturation voltage	$I_C = 10\text{A}, I_B = 40\text{mA}$			2	V
C_c Collector capacitance	$I_E = I_e = 0, V_{CB} = 10\text{V} f = 1\text{MHz}$		300		pF
f_{hfe} Cut-off frequency	$I_C = 5\text{A}, V_{CE} = 3\text{V}$		50		kHz
$E_{(BR)}$ Turn-off breakdown energy with inductive load	$-I_{Boff} = 0, I_{CC} = 7.8\text{ A}$ $t_p = 1\text{ms}, \delta < 1\%$	150			mJ
h_{fe} Small signal current gain	$I_C = 5\text{A}, V_{CE} = 3\text{V}, f = 1\text{MHz}$		20		V
V_F Diode, forward voltage	$I_F = 10\text{A}$		2.5		

Note 1: Measured under pulse conditions , $t_p < 300\mu\text{s}, \delta < 2\%$



R1 typ. 3K Ω
R2 typ. 80 Ω

Circuit Diagram