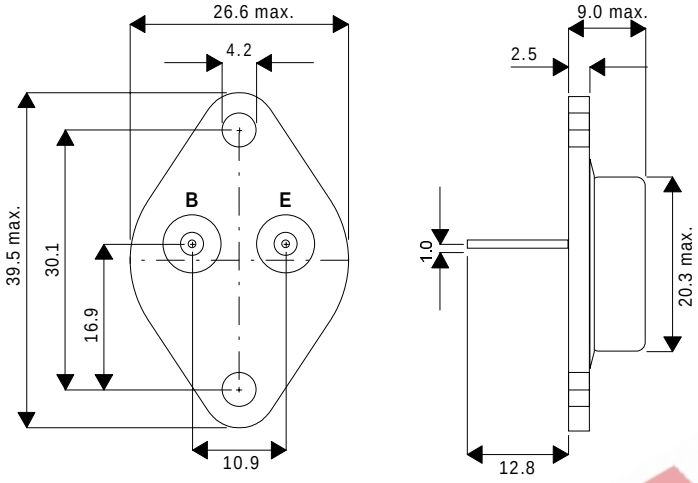
BDX63
BDX63A
BDX63B
BDX63C

NPN EPITAXIAL BASE DARLINGTON POWER TRANSISTOR

MECHANICAL DATA
Dimensions in mm



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

PNP complements are:
BDX62, BDX62A, BDX62B, BDX62C.

TO3 Package.
Case connected to collector.

ABSOLUTE MAXIMUM RATINGS (T_{case}=25°C unless otherwise stated)

		BDX 63	BDX 63A	BDX 63B	BDX 63C	
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	8				A
I_{CM}	Collector current (peak)	12				A
I_B	Base current	150				mA
P_{tot}	Total power dissipation at T_{case}= 25°C	90				W
T_j	Maximum junction temperature	200				°C
T_{stj}	Storage junction temperature	-65 to 200				°C
$R_{th\ j\text{-}mb}$	Thermal resistance, junction to mounting base.	1.94				°C / W

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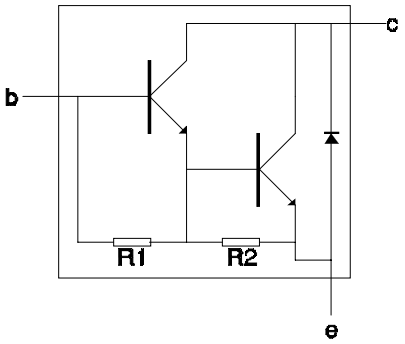
SEME LAB

BDX63
BDX63A
BDX63B
BDX63C

ELECTRICAL CHARACTERISTICS (T_j = 25°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} = ½V_{CBOmax}, T_j = 200°C			0.2 2	mA
I_{CEO}	Collector cut-off current	I_B = 0, V_{CE} = ½V_{CEOmax}			0.5	mA
I_{EBO}	Emitter cut-off current	I_C = 0, V_{EB} = 5V			5	mA
h_{FE}	D.C. current gain (note 1)	I_C = 0.5A, V_{CE} = 3V		2500		
		I_C = 3A, V_{CE} = 3V	1000			
		I_C = 8A, V_{CE} = 3V		2600		
V_{BE}	Base - emitter voltage (note 1)	I_C = 3A, V_{CE} = 3V			2.5	V
V_{CEsat}	Collector - emitter saturation voltage	I_C = 3A, I_B = 12mA			2	V
C_c	Collector capacitance	I_E = I_e = 0, V_{CB} = 10V		100		pF
f_{hfe}	Cut-off frequency	I_C = 3A, V_{CE} = 3V		100		kHz
$E_{(BR)}$	Turn-off breakdown energy with inductive load	$-I_{Boff}$ = 0, I_{Con} = 4.5 A t_p = 1ms, T = 100ms	50			mJ
h_{FE1}/h_{FE2}	D.C. current gain ratio of complementary matched pairs	I_C = 3A, V_{CE} = 3V			2.5	
$\|h_{fe}\|$	Small signal current gain	I_C = 3A, V_{CE} = 3V, f = 1MHz		100		
V_F	Diode, forward voltage	I_F = 3A		1.2		V

Note 1: Measured under pulse conditions , t_p < 300μs, δ < 2%



R1 typ. 8KΩ
R2 typ. 100Ω

Circuit diagram.