



**BDX 64, A, B, C**

**PNP SILICON DARLINGTONS**

General purpose darlingtons designed for power amplifier and switching applications.

**ABSOLUTE MAXIMUM RATINGS**

Symbol	Ratings		Value	Unit	
$V_{CEO}$	Collector-Emitter Voltage		BDX64	-60	V
			BDX64A	-80	
			BDX64B	-100	
			BDX64C	-120	
$V_{CEV}$	Collector-Emitter Voltage	$V_{BE} = -1.5 V$	BDX64	-60	V
			BDX64A	-80	
			BDX64B	-100	
			BDX64C	-120	
$V_{EBO}$	Emitter-Base Voltage		BDX64	-5.0	V
			BDX64A		
			BDX64B		
			BDX64C		
$I_C$	Collector Current	$I_{C(RMS)}$	-12	A	
		$I_{CM}$			-16



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Symbol	Ratings		Value	Unit
$I_B$	Base Current	BDX64 BDX64A BDX64B BDX64C	0.2	A
$P_T$	Power Dissipation	@ $T_C = 25^\circ$ BDX64 BDX64A BDX64B BDX64C	117	Watts W/°C
$T_J$	Junction Temperature	BDX64 BDX64A BDX64B BDX64C	-55 to +200	°C
$T_S$	Storage Temperature			

### THERMAL CHARACTERISTICS

Symbol	Ratings		Value	Unit
$R_{thJ-C}$	Thermal Resistance, Junction to Case	BDX64 BDX64A BDX64B BDX64C	1.5	°C/W

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## ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit	
$V_{CEO(SUS)}$	Collector-Emitter Breakdown Voltage (*)	$I_C=-0.1\text{ A}, I_B=0, L=25\text{mH}$	<b>BDX64</b>	-60	-	-	V
			<b>BDX64A</b>	-80	-	-	
			<b>BDX64B</b>	-100	-	-	
			<b>BDX64C</b>	-120	-	-	
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=-30\text{ V}$	<b>BDX64</b>	-	-	-1.0	mA
		$V_{CE}=-40\text{ V}$	<b>BDX64A</b>	-	-		
		$V_{CE}=-50\text{ V}$	<b>BDX64B</b>	-	-		
		$V_{CE}=-60\text{ V}$	<b>BDX64C</b>	-	-		
$I_{EBO}$	Emitter Cutoff Current	$V_{BE}=-5\text{ V}$	<b>BDX64</b> <b>BDX64A</b> <b>BDX64B</b> <b>BDX64C</b>	-	-	-5.0	mA

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Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit
$I_{CBO}$	Collector-Base Cutoff Current	$V_{CBO}=-60\text{ V}$	-	-	0.2	-
		$V_{CBO}=-60\text{ V}$ $T_{CASE}=150^{\circ}\text{C}$	-	-	2	
		$V_{CBO}=-80\text{ V}$	-	-	0.2	
		$V_{CBO}=-80\text{ V}$ $T_{CASE}=150^{\circ}\text{C}$	-	-	2	
		$V_{CBO}=-100\text{ V}$	-	-	0.2	
		$V_{CBO}=-100\text{ V}$ $T_{CASE}=150^{\circ}\text{C}$	-	-	2	
		$V_{CBO}=-120\text{ V}$	-	-	0.2	
		$V_{CBO}=-120\text{ V}$ $T_{CASE}=150^{\circ}$	-	-	2	
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C=-5.0\text{ A}$ , $I_B=-20\text{ mA}$	-	-	-2	V
$V_F$	Forward Voltage (pulse method)	$I_F=5\text{ A}$	-	1.8	-	V
$V_{BE}$	Base-Emitter Voltage (*)	$I_C=-5.0\text{ A}$ , $V_{CE}=-3\text{ V}$	-	-	-2.5	V
$F_{h21e}$	Forward current transfer ratio Cutoff frequency	$V_{CE}=3\text{ V}$ , $I_C=5\text{ A}$	-	60	-	KHz

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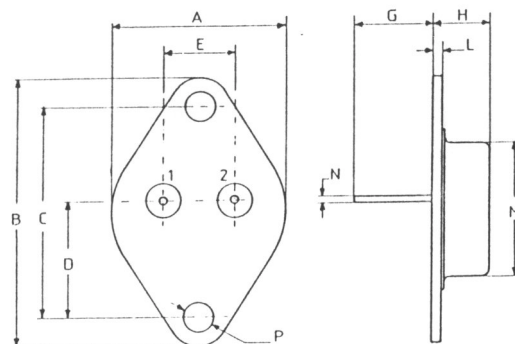
Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit
$f_T$	Transition Frequency	$V_{CE}=-3\text{ V}$ , $I_C=-5\text{ A}$ , $f=1\text{ MHz}$	-	7	-	MHz
$h_{21E}$	Static forward current transfer ratio (*)	$V_{CE}=-3\text{ V}$ , $I_C=-1\text{ A}$	-	1500	-	-
		$V_{CE}=-3\text{ V}$ , $I_C=-5\text{ A}$	1000	-	-	-
		$V_{CE}=-3\text{ V}$ , $I_C=-12\text{ A}$	-	750	-	-

(\*) Pulse Width  $\approx 300\ \mu\text{s}$ , Duty Cycle  $\angle 2.0\%$

(1) collector-Emitter voltage limited et  $V_{CEci} = V_{\text{rated}}$  by an auxiliary circuit

## MECHANICAL DATA CASE TO-3

DIMENSIONS		
	mm	inches
A	25,51	1,004
B	38,93	1,53
C	30,12	1,18
D	17,25	0,68
E	10,89	0,43
G	11,62	0,46
H	8,54	0,34
L	1,55	0,6
M	19,47	0,77
N	1	0,04
P	4,06	0,16



Pin 1 :	Base
Pin 2 :	Collector
Case :	Emitter