

BDX 64, A, B, C

PNP SILICON DARLINGTONS

General purpose darlingtonts 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	$V_{BE} = -1.5 \text{ V}$	BDX64	-60	V
			BDX64A	-80	
			BDX64B	-100	
			BDX64C	-120	
V_{EBO}	Emitter-Base Voltage		BDX64 BDX64A BDX64B BDX64C	-5.0	V
I_C	Collector Current	$I_{C(RMS)}$	BDX64 BDX64A BDX64B BDX64C	-12	A
		I_{CM}	BDX64 BDX64A BDX64B BDX64C	-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 (*)	$I_C=-0.1\text{ A}, I_B=0, L=25\text{mH}$	BDX64	-60	-	-	V
			BDX64A	-80	-	-	
			BDX64B	-100	-	-	
			BDX64C	-120	-	-	
I_{CEO}	Collector Cutoff Current	$V_{CE}=-30\text{ V}$	BDX64	-	-	-1.0	mA
		$V_{CE}=-40\text{ V}$	BDX64A	-	-		
		$V_{CE}=-50\text{ V}$	BDX64B	-	-		
		$V_{CE}=-60\text{ V}$	BDX64C	-	-		
I_{EBO}	Emitter Cutoff Current	$V_{BE}=-5\text{ V}$	BDX64 BDX64A BDX64B BDX64C	-	-	-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	-	
		BDX64	-	-	2		
		$V_{CBO}=-60\text{ V}$ $T_{CASE}=150^{\circ}\text{C}$	-	-	2		
		$V_{CBO}=-80\text{ V}$	-	-	0.2		
		BDX64A	-	-	2		
		$V_{CBO}=-80\text{ V}$ $T_{CASE}=150^{\circ}\text{C}$	-	-	2		
		$V_{CBO}=-100\text{ V}$	-	-	0.2		
		BDX64B	-	-	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		
		BDX64C	-	-	2		
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C=-5.0\text{ A}, I_B=-20\text{ mA}$	BDX64 BDX64A BDX64B BDX64C	-	-	-2	V
V_F	Forward Voltage (pulse method)	$I_F=5\text{ A}$	BDX64 BDX64A BDX64B BDX64C	-	1.8	-	V
V_{BE}	Base-Emitter Voltage (*)	$I_C=-5.0\text{ A}, V_{CE}=-3\text{ V}$	BDX64 BDX64A BDX64B BDX64C	-	-	-2.5	V
F_{h21e}	Forward current transfer ratio Cutoff frequency	$V_{CE}=3\text{ V}, I_C=5\text{ A}$	BDX64 BDX64A BDX64B BDX64C	-	60	-	KHz

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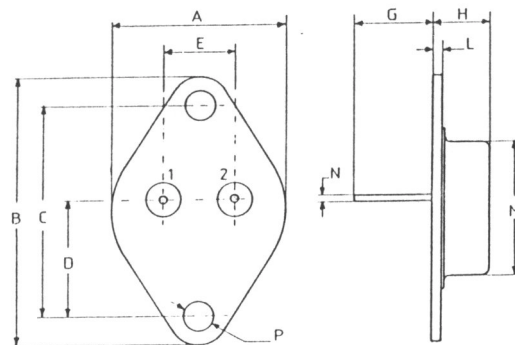
Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit
f_T	Transition Frequency	$V_{CE}=-3\text{ V}$, $I_C=-5\text{ A}$, $f=1\text{ MHz}$	-	7	-	MHz
h_{21E}	Static forward current transfer ratio (*)	$V_{CE}=-3\text{ V}$, $I_C=-1\text{ A}$	-	1500	-	-
		$V_{CE}=-3\text{ V}$, $I_C=-5\text{ A}$	1000	-	-	-
		$V_{CE}=-3\text{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