

## BDX 66, A, B, C

### PNP SILICON DARLINGTONS

High current power darlington designed for power amplification and switching applications.

#### ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit	
$V_{CEO}$	Collector-Emitter Voltage		BDX66 BDX66A BDX66B BDX66C	-60 -80 -100 -120	V
			BDX66 BDX66A BDX66B BDX66C	-60 -80 -100 -120	
			BDX66 BDX66A BDX66B BDX66C	-60 -80 -100 -120	
			BDX66 BDX66A BDX66B BDX66C	-60 -80 -100 -120	
$V_{CBO}$	Collector-Base Voltage		BDX66 BDX66A BDX66B BDX66C	-60 -80 -100 -120	V
			BDX66 BDX66A BDX66B BDX66C	-60 -80 -100 -120	
			BDX66 BDX66A BDX66B BDX66C	-60 -80 -100 -120	
			BDX66 BDX66A BDX66B BDX66C	-60 -80 -100 -120	
$V_{EBO}$	Emitter-Base Voltage		BDX66 BDX66A BDX66B BDX66C	-5.0	V
			BDX66 BDX66A BDX66B BDX66C	-5.0	
			BDX66 BDX66A BDX66B BDX66C	-5.0	
			BDX66 BDX66A BDX66B BDX66C	-5.0	
$I_C$	Collector Current	$I_{C(RMS)}$	BDX66 BDX66A BDX66B BDX66C	-16	A
		$I_{CM}$	BDX66 BDX66A BDX66B BDX66C	-20	
			BDX66 BDX66A BDX66B BDX66C	-16	
			BDX66 BDX66A BDX66B BDX66C	-20	
$I_B$	Base Current		BDX66 BDX66A BDX66B BDX66C	-0.25	A
			BDX66 BDX66A BDX66B BDX66C	-0.25	
			BDX66 BDX66A BDX66B BDX66C	-0.25	
			BDX66 BDX66A BDX66B BDX66C	-0.25	
$P_T$	Power Dissipation	@ $T_C = 25^\circ$	BDX66 BDX66A BDX66B BDX66C	150	Watts W/°C
			BDX66 BDX66A BDX66B BDX66C	150	
			BDX66 BDX66A BDX66B BDX66C	150	
			BDX66 BDX66A BDX66B BDX66C	150	
$T_J$	Junction Temperature		BDX66 BDX66A BDX66B BDX66C	-55 to +200	°C
			BDX66 BDX66A BDX66B BDX66C	-55 to +200	
$T_S$	Storage Temperature		BDX66 BDX66A BDX66B BDX66C	-55 to +200	°C

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## THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
$R_{thJ-C}$	Thermal Resistance, Junction to Case BDX66 BDX66A BDX66B BDX66C	1.17	°C/W

## ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit	
$V_{CEO(SUS)}$	Collector-Emitter Breakdown Voltage (*)	$I_C = -0.1 \text{ A}, L = 25 \text{ mH}$	BDX66	-60	-	-	V
			BDX66A	-80	-	-	
			BDX66B	-100	-	-	
			BDX66C	-120	-	-	
$I_{CEO}$	Collector Cutoff Current	$V_{CE} = -30 \text{ V}$	BDX66	-	-	-3	mA
		$V_{CE} = -40 \text{ V}$	BDX66A	-	-		
		$V_{CE} = -50 \text{ V}$	BDX66B	-	-		
		$V_{CE} = -60 \text{ V}$	BDX66C	-	-		

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Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit
$I_{EBO}$	Emitter Cutoff Current	$V_{BE}=-5\text{ V}$	-	-	-5.0	mA
$I_{CBO}$	Collector-Base Cutoff Current	$T_{CASE}=25^{\circ}\text{C}, V_{CB}=-40\text{ V}$	-	-	-1	mA
			BDX66			
		$T_{CASE}=150^{\circ}\text{C}$	-	-	-5	
		$T_{CASE}=25^{\circ}\text{C}, V_{CB}=-50\text{ V}$	-	-	-1	
			BDX66A			
		$T_{CASE}=150^{\circ}\text{C}$	-	-	-5	
		$T_{CASE}=25^{\circ}\text{C}, V_{CB}=-60\text{ V}$	-	-	-1	
			BDX66B			
		$T_{CASE}=150^{\circ}\text{C}$	-	-	-5	
		$T_{CASE}=25^{\circ}\text{C}, V_{CB}=-70\text{ V}$	-	-	-1	
			BDX66C			
		$T_{CASE}=150^{\circ}\text{C}$	-	-	-5	
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C=-10\text{ A}, I_B=-40\text{ mA}$	-	-	-2	V
$C_{22b}$		$I_E=0\text{ A}, V_{CB}=-10\text{ V}, f=1\text{ MHz}$	-	300	-	pF
$t_{on}$	Switching characteristics	$V_{CC}=12\text{ V}, I_C=-10\text{ A}, I_{B1}=-I_{B2}=0.04$	-	1	-	$\mu\text{s}$
$t_{off}$			-	3.5	-	

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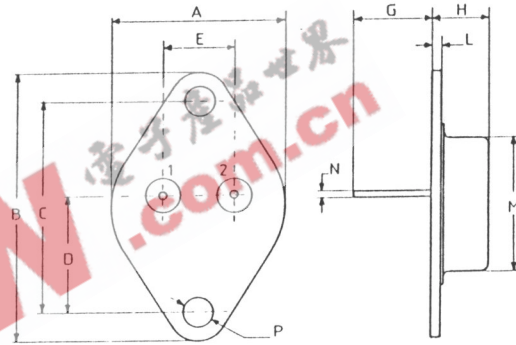
Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit
$f_c$		$V_{CE} = -3\text{ V}$ , $I_C = -5\text{ A}$ , $f = 1\text{ MHz}$	-	60	-	kHz

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

(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