

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

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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	
$V_{\text{CEO(SUS)}}$	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	$V_{\text{CE}} = -30\text{ V}$	BDX66	-	-	-3	mA
		$V_{\text{CE}} = -40\text{ V}$	BDX66A	-	-		
		$V_{\text{CE}} = -50\text{ V}$	BDX66B	-	-		
		$V_{\text{CE}} = -60\text{ V}$	BDX66C	-	-		

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

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Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit
f _c		V _{CE} =-3 V, I _C =-5 A, f=1 MHz		60	-	kHz

(*) Pulse Width ≈ 300 μs, Duty Cycle < 2.0%
(1) collector-Emitter voltage limited et V_{CEci} = V_{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

