



BDX67, A, B, C

NPN SILICON DARLINGTONS

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

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit	
V_{CEO}	Collector-Emitter Voltage		BDX67	60	V
			BDX67A	80	
			BDX67B	100	
			BDX67C	120	
V_{CBO}	Collector-Base Voltage		BDX67	80	V
			BDX67A	100	
			BDX67B	120	
			BDX67C	140	
V_{EBO}	Emitter-Base Voltage		BDX67	5.0	V
			BDX67A		
			BDX67B		
			BDX67C		
I_C	Collector Current	$I_{C(RMS)}$	BDX67	16	A
			BDX67A		
			BDX67B		
			BDX67C		
		I_{CM}	BDX67	20	
			BDX67A		
			BDX67B		
			BDX67C		
I_B	Base Current		BDX67	0.25	A
			BDX67A		
			BDX67B		
			BDX67C		
P_T	Power Dissipation	@ $T_C = 25^\circ$	BDX67	150	Watts W/°C
			BDX67A		
			BDX67B		
			BDX67C		
T_J	Junction Temperature		BDX67	-55 to +200	°C
T_S	Storage Temperature		BDX67A		
			BDX67B		
			BDX67C		



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THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit	
R_{thJ-C}	Thermal Resistance, Junction to Case	BDX67	1.17	°C/W
		BDX67A		
		BDX67B		
		BDX67C		

ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit	
$V_{CEO(SUS)}$	Collector-Emitter Breakdown Voltage (*)	$I_C=0.1\text{ A, L}=25\text{mH}$	BDX67	60	-	-	V
			BDX67A	80	-	-	
			BDX67B	100	-	-	
			BDX67C	120	-	-	
I_{CEO}	Collector Cutoff Current	$V_{CE}=30\text{ V}$	BDX67	-	-	3	mA
		$V_{CE}=40\text{ V}$	BDX67A	-	-		
		$V_{CE}=50\text{ V}$	BDX67B	-	-		
		$V_{CE}=60\text{ V}$	BDX67C	-	-		
I_{EBO}	Emitter Cutoff Current	$V_{BE}=5\text{ V}$	BDX67	-	-	5.0	mA
			BDX67A				
			BDX67B				
			BDX67C				
I_{CBO}	Collector-Base Cutoff Current	$T_{CASE}=25^\circ\text{C, } V_{CB}=60\text{ V}$	BDX67	-	-	1	mA
		$T_{CASE}=200^\circ\text{C, } V_{CB}=40\text{ V}$				5	
		$T_{CASE}=25^\circ\text{C, } V_{CB}=80\text{ V}$	BDX67A	-	-	1	
		$T_{CASE}=200^\circ\text{C, } V_{CB}=50\text{ V}$				5	

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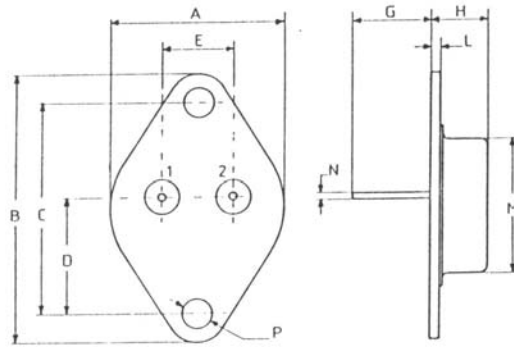
Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit	
I_{CBO}	Collector-Base Cutoff Current	$T_{CASE}=25^{\circ}C, V_{CB}=100 V$	BDX67B	-	-	1	mA
		$T_{CASE}=200^{\circ}C, V_{CB}=60 V$		-	-	5	
		$T_{CASE}=25^{\circ}C, V_{CB}=120 V$	BDX67C	-	-	1	
		$T_{CASE}=200^{\circ}C, V_{CB}=70 V$		-	-	5	
h_{FE}	DC Current Gain	$V_{CE}=3 V, I_C=1 A$	-	5200	-	-	
		$V_{CE}=3 V, I_C=10 A$	1000	-	-		
		$V_{CE}=3 V, I_C=16 A$	-	4000	-		
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C=10 A, I_B=40 mA$	BDX67	-	-	2	V
			BDX67A				
			BDX67B				
			BDX67C				
V_{BE}	Base-Emitter Voltage(1&2)	$V_{CE}=3 V, I_C=10 A$	BDX67	-	-	2,5	V
			BDX67A				
			BDX67B				
			BDX67C				
V_F	Diode forward voltage	$I_F=10 A$	BDX67	-	2,5	-	V
			BDX67A				
			BDX67B				
			BDX67C				
C_c		$I_E=0 A, V_{CB}=10V$	BDX67	-	300	-	pF
			BDX67A				
			BDX67B				
			BDX67C				
t_{on}	Switching characteristics	$V_{CC}=12V, I_C=-10 A$ $I_{B1}=-I_{B2}=0.04 A$	BDX67	-	1	-	μs
BDX67A							
BDX67B							
BDX67C							
t_{off}			BDX67	-	3.5	-	μs
			BDX67A				
			BDX67B				
f_{hfe}		$V_{CE}=-3 V, I_C=-5 A$	BDX67	-	50	-	kHz
			BDX67A				
			BDX67B				
			BDX67C				

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

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

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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 :	Emitter
Case :	Collector

*Information furnished is believed to be accurate and reliable. However, CS assumes no responsibility for the consequences of use of such information nor for errors that could appear.
Data are subject to change without notice*



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