

## 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 BDX67A BDX67B BDX67C 16	A
		$I_{CM}$	BDX67 BDX67A BDX67B BDX67C 20	
$I_B$	Base Current		BDX67 BDX67A BDX67B BDX67C 0.25	A
$P_T$	Power Dissipation	@ $T_C = 25^\circ$	BDX67 BDX67A BDX67B BDX67C 150	Watts W/°C
$T_J$	Junction Temperature		BDX67 BDX67A	°C
$T_S$	Storage Temperature		BDX67B BDX67C -55 to +200	

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## THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
$R_{thJ-C}$	Thermal Resistance, Junction to Case	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 (*)	$I_C=0.1\text{ A, }L=25\text{mH}$	<b>BDX67</b>	60	-	-	V
			<b>BDX67A</b>	80	-	-	
			<b>BDX67B</b>	100	-	-	
			<b>BDX67C</b>	120	-	-	
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=30\text{ V}$	<b>BDX67</b>	-	-	3	mA
		$V_{CE}=40\text{ V}$	<b>BDX67A</b>	-	-		
		$V_{CE}=50\text{ V}$	<b>BDX67B</b>	-	-		
		$V_{CE}=60\text{ V}$	<b>BDX67C</b>	-	-		
$I_{EBO}$	Emitter Cutoff Current	$V_{BE}=5\text{ V}$	<b>BDX67</b> <b>BDX67A</b> <b>BDX67B</b> <b>BDX67C</b>	-	-	5.0	mA
$I_{CBO}$	Collector-Base Cutoff Current	$T_{CASE}=25^\circ\text{C, }V_{CB}=40\text{ V}$	<b>BDX67</b>	-	-	1	mA
		$T_{CASE}=150^\circ\text{C}$		-	-	5	
		$T_{CASE}=25^\circ\text{C, }V_{CB}=50\text{ V}$	<b>BDX67A</b>	-	-	1	
		$T_{CASE}=150^\circ\text{C}$		-	-	5	

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Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit		
$I_{CBO}$	Collector-Base Cutoff Current	$T_{CASE}=25^{\circ}C, V_{CB}=60 V$	-	-	1	mA		
			<b>BDX67B</b>		5			
		$T_{CASE}=150^{\circ}C$			-		-	1
			<b>BDX67C</b>		5			
$T_{CASE}=25^{\circ}C, V_{CB}=70 V$	-	-			1			
		$T_{CASE}=150^{\circ}C$	-	-	5			
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C=10 A, I_B=40 mA$	<b>BDX67 BDX67A BDX67B BDX67C</b>		-	-	2	V
$C_{22b}$		$I_E=0 A, V_{CB}=10V, f=1 MHz$	<b>BDX67 BDX67A BDX67B BDX67C</b>		-	300	-	pF
$t_{on}$	Switching characteristics	$V_{CC}=12V, I_C=-10 A, I_{B1}=-I_{B2}=0.04 A$	<b>BDX67 BDX67A BDX67B BDX67C</b>		-	1	-	$\mu s$
$t_{off}$			-	3.5	-			
$f_c$		$V_{CE}=-3 V, I_C=-5 A, f=1 MHz$	<b>BDX67 BDX67A BDX67B BDX67C</b>		-	50	-	kHz

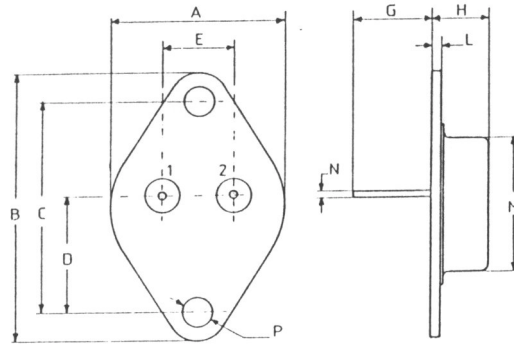
(\*) Pulse Width  $\approx 300 \mu s$ , Duty Cycle  $\angle 2.0\%$

(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 :	Collector
Case :	Emitter

*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*