



## BDV67A, B, C, D

### NPN SILICON DARLINGTONS POWER TRANSISTORS

The BDV67 is epitaxial base Darlington transistors for audio output stages and general amplifier and switching applications.  
The complementary is BDV66A, B, C, D.

#### ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit	
$V_{CEO}$	Collector-Emitter Voltage	BDV67A	80	V	
		BDV67B	100		
		BDV67C	120		
		BDV67D	150		
$V_{CBO}$	Collector-Base Voltage	BDV67A	100	V	
		BDV67B	120		
		BDV67C	140		
		BDV67D	160		
$V_{EBO}$	Emitter-Base Voltage	BDV67A	5.0	V	
		BDV67B			
		BDV67C			
		BDV67D			
$I_C$	Collector Current	$I_C$	BDV67A	16	A
			BDV67B		
			BDV67C		
			BDV67D		
		$I_{CM}$	BDV67A	20	
			BDV67B		
			BDV67C		
			BDV67D		
$I_B$	Base Current	BDV67A	0.5	A	
		BDV67B			
		BDV67C			
		BDV67D			
$P_T$	Power Dissipation	@ $T_{mb} = 25^\circ C$	BDV67A	200	Watts
			BDV67B		
			BDV67C		
			BDV67D		
$T_J$	Junction Temperature	BDV67A	150	°C	
		BDV67B			
		BDV67C			
		BDV67D			
$T_S$	Storage Temperature	BDV67A	-65 to +150	°C	
		BDV67B			
		BDV67C			
		BDV67D			



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### THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit	
$R_{thJ-mb}$	Thermal Resistance, Junction to Mounting Base	BDV67A	0.625	°C/W
		BDV67B		
		BDV67C		
		BDV67D		

### ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit	
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=40\text{ V}$	BDV67A	-	-	3	mA
		$V_{CE}=50\text{ V}$	BDV67B	-	-		
		$V_{CE}=60\text{ V}$	BDV67C	-	-		
		$V_{CE}=75\text{ V}$	BDV67D	-	-		
$I_{EBO}$	Emitter Cutoff Current	$V_{BE}=5\text{ V}$	BDV67A	-	-	5.0	mA
			BDV67B				
			BDV67C				
			BDV67D				
$I_{CBO}$	Collector-Base Cutoff Current	$T_j=25^\circ\text{C}, V_{CB}=V_{CBO}$	BDV67A	-	-	1	mA
			BDV67B				
			BDV67C				
			BDV67D				
		$T_j=150^\circ\text{C}, V_{CB}=V_{CBO}$	BDV67A	-	-	5	
			BDV67B				
			BDV67C				
			BDV67D				

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Symbol	Ratings	Test Condition(s)	Min	Typ	M x	Unit	
$h_{FE}$	DC Current Gain	$V_{CE}=3\text{ V}, I_C=1\text{ A}$	-	3000	-	-	
		$V_{CE}=3\text{ V}, I_C=10\text{ A}$	1000	-	-	-	
		$V_{CE}=3\text{ V}, I_C=16\text{ A}$	-	1000	-	-	
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C=10\text{ A}, I_B=40\text{ mA}$	BDV67A	-	-	2	V
			BDV67B				
			BDV67C				
			BDV67D				
$V_{BE}$	Base-Emitter Voltage(1&2)	$V_{CE}=3\text{ V}, I_C=10\text{ A}$	BDV67A	-	-	2,5	V
			BDV67B				
			BDV67C				
			BDV67D				
$V_F$	Diode forward voltage	$I_F=10\text{ A}$	BDV67A	-	-	3	V
			BDV67B				
			BDV67C				
			BDV67D				
$C_c$		$I_E=0\text{ A}, V_{CB}=10\text{ V}$	BDV67A	-	300	-	pF
			BDV67B				
			BDV67C				
			BDV67D				
$t_{on}$	Switching times	$V_{CC}=12\text{ V}, I_C=-10\text{ A}$ $I_{B1}=-I_{B2}=0.04\text{ A}$	BDV67A	-	1	-	$\mu\text{S}$
			BDV67B				
			BDV67C				
			BDV67D				
$t_{off}$			BDV67A	-	3.5	-	
			BDV67B				
			BDV67C				
			BDV67D				
$f_{hfe}$		$V_{CE}=-3\text{ V}, I_C=-5\text{ A}$	BDV67A	-	60	-	kHz
			BDV67B				
			BDV67C				
			BDV67D				

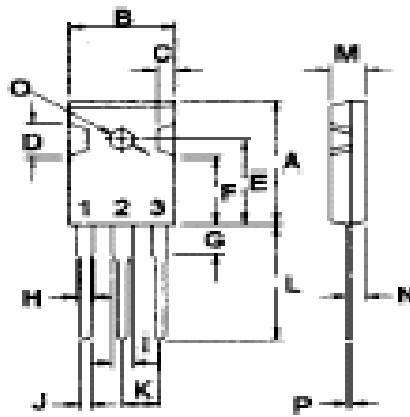
(\*) Pulse Width  $\approx 300\ \mu\text{s}$ , Duty Cycle  $\angle 2.0\%$

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

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### MECHANICAL DATA CASE TO-3P (TO247)

DIM	MILLIMETERS	
	MIN	MAX
A	20.63	22.38
B	15.38	16.20
C	1.90	2.70
D	5.10	6.10
E	14.81	15.22
F	11.72	12.84
G	4.20	4.50
H	1.82	2.46
I	2.92	3.23
J	0.89	1.53
K	5.26	5.66
L	18.50	21.50
M	4.68	5.36
N	2.40	2.80
O	3.25	3.65
P	0.55	0.70



Pin 1 :	Base
Pin 2 :	Collector
Pin 3 :	Emitter



**TO-247(3P)**



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*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*