



BDV67-A-B-C-D

NPN SILICON DARLINGTONS POWER TRANSISTORS

They are silicon epitaxial base transistors mounted in TO-3PN.
They are designed for audio output stages and general amplifier and switching applications.
complementary is BDV66-A-B-C
Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit	
V_{CEO}	Collector-Emitter Voltage	BDV67	60	V	
		BDV67A	80		
		BDV67B	100		
		BDV67C	120		
		BDV67D	150		
V_{CBO}	Collector-Base Voltage	BDV67	80	V	
		BDV67A	100		
		BDV67B	120		
		BDV67C	140		
		BDV67D	160		
V_{EBO}	Emitter-Base Voltage	BDV67	5.0	V	
		BDV67A			
		BDV67B			
		BDV67C			
		BDV67D			
I_B	Base Current	BDV67	0.5	A	
		BDV67A			
		BDV67B			
		BDV67C			
		BDV67D			
I_C	Collector Current	BDV67	16	A	
		BDV67A			
		BDV67B			
		BDV67C			
		BDV67D			
I_{CM}		BDV67	20		
		BDV67A			
		BDV67B			
		BDV67C			
		BDV67D			

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ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings			Value	Unit
P_T	Power Dissipation	@ $T_{mb} = 25^\circ\text{C}$	BDV67	200	W
			BDV67A		
			BDV67B		
			BDV67C		
			BDV67D		
T_J	Junction Temperature		BDV67	150	$^\circ\text{C}$
			BDV67A		
			BDV67B		
			BDV67C		
			BDV67D		
T_s	Storage Temperature		BDV67	-65 to +150	$^\circ\text{C}$
			BDV67A		
			BDV67B		
			BDV67C		
			BDV67D		

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJ-mb}	Thermal Resistance, Junction to Mounting Base	0.625	$^\circ\text{C} / \text{W}$

SWITCHING TIMES

Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
t_{on}	turn-on time	$I_C = 10\text{ A}, V_{CC} = 12\text{ V}$ $I_{B1} = -I_{B2} = 40\text{ mA}$	-	1	-	μs
t_{off}	turn-off time		-	3.5	-	

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ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)		Min	Typ	Mx	Unit	
I _{CEO}	Collector Cutoff Current	V _{CE} = 30 V, I _B = 0		BDV67	-	-	1	mA
		V _{CE} = 40 V, I _B = 0		BDV67A	-	-		
		V _{CE} = 50 V, I _B = 0		BDV67B	-	-		
		V _{CE} = 60 V, I _B = 0		BDV67C	-	-		
		V _{CE} = 75 V, I _B = 0		BDV67D	-	-		
I _{EBO}	Emitter Cutoff Current	V _{BE} = 5 V, I _C = 0		BDV67	-	-	5.0	mA
				BDV67A	-	-		
				BDV67B	-	-		
				BDV67C	-	-		
				BDV67D	-	-		
I _{CBO}	Collector-Base Cutoff Current	I _B = 0 T _J =25°C	V _{CB} = 80 V	BDV67	-	-	1	mA
			V _{CB} = 100 V	BDV67A	-	-		
			V _{CB} = 120 V	BDV67B	-	-		
			V _{CB} = 140 V	BDV67C	-	-		
			V _{CB} = 160 V	BDV67D	-	-		
		I _B = 0 T _J =150° C	V _{CB} = 40 V	BDV67	-	-	4	
			V _{CB} = 50 V	BDV67A	-	-		
			V _{CB} = 60 V	BDV67B	-	-		
			V _{CB} = 70 V	BDV67C	-	-		
			V _{CB} = 80 V	BDV67D	-	-		
V _{CEO}	Collector-emitter Breakdown Voltage (*)	I _C = 30 mA, I _B = 0		BDV67	60	-	-	V
				BDV67A	80	-	-	
				BDV67B	100	-	-	
				BDV67C	120	-	-	
				BDV67D	150	-	-	
h _{FE}	DC Current Gain (*)	V _{CE} = 3 V, I _C = 1 A		BDV67 BDV67A	-	3000	-	-
		V _{CE} = 3 V, I _C = 10 A		BDV67B BDV67C	1000	-	-	
		V _{CE} = 3 V, I _C = 16 A		BDV67D	-	1000	-	
V _{CE(SAT)}	Collector-Emitter saturation Voltage (*)	I _C = 10 A, I _B = 40 mA		BDV67	-	-	2	V
				BDV67A				
				BDV67B				
				BDV67C				
				BDV67D				

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ELECTRICAL CHARACTERISTICS

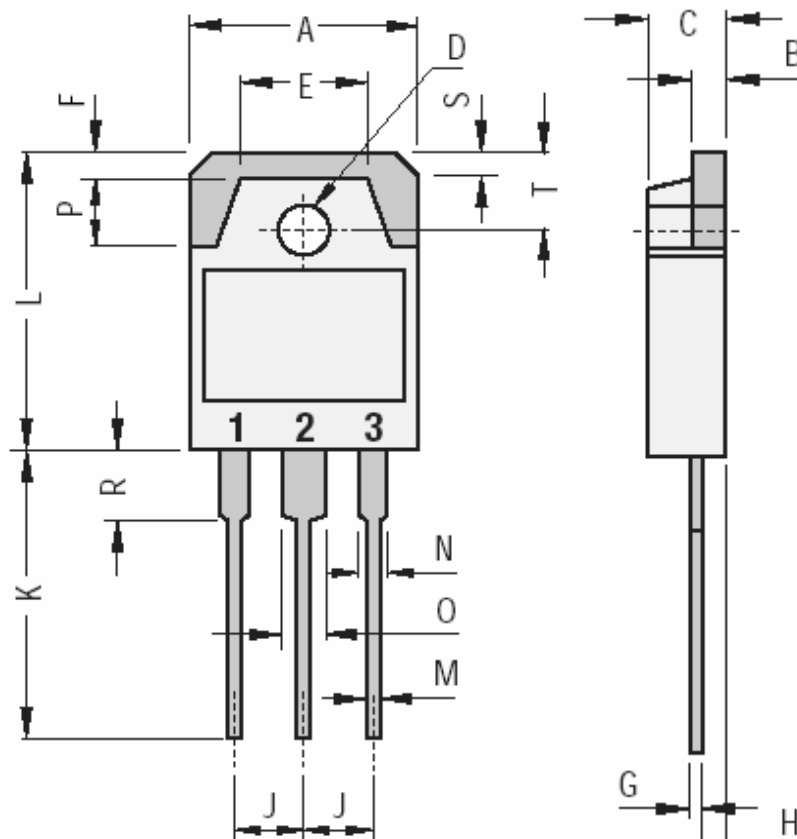
TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)		Min	Typ	Max	Unit
V_{BE}	Base-Emitter Voltage (*)	$V_{CE} = 3\text{ V}$, $I_C = 10\text{ A}$	BDV67	-	-	2,5	V
			BDV67A				
			BDV67B				
			BDV67C				
			BDV67D				
V_F	Diode forward voltage	$I_F = 10\text{ A}$	BDV67	-	-	3	V
			BDV67A				
			BDV67B				
			BDV67C				
			BDV67D				
C_c	Collector capacitance	$I_E = 0\text{ A}$, $V_{CB} = 10\text{ V}$ $f = 1\text{ MHz}$	BDV67	-	300	-	pF
			BDV67A				
			BDV67B				
			BDV67C				
			BDV67D				

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

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MECHANICAL DATA CASE TO3PN Non Isolated Plastic Package



DIMENSIONS (mm)		
	Min.	Max.
A	15.20	16.00
B	1.90	2.10
C	4.60	5.00
D	3.10	3.30
E		9.60
F		2.00
G	0.35	0.55
H		1.40
J	5.35	5.55
K	20.00	
L	19.60	20.20
M	0.95	1.25
N		2.00
O		3.00
P		4.00
R		4.00
S		1.80
T	4.80	5.20

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

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