



## 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		



## BDV67-A-B-C-D

### 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	-	$\mu\text{s}$
$t_{off}$	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	$V_{CE}= 30\text{ V}, I_B= 0$		BDV67	-	-	1 mA
		$V_{CE}= 40\text{ V}, I_B= 0$		BDV67A	-	-	
		$V_{CE}= 50\text{ V}, I_B= 0$		BDV67B	-	-	
		$V_{CE}= 60\text{ V}, I_B= 0$		BDV67C	-	-	
		$V_{CE}= 75\text{ V}, I_B= 0$		BDV67D	-	-	
$I_{EBO}$	Emitter Cutoff Current	$V_{BE}= 5\text{ V}, I_C= 0$		BDV67	-	-	5.0 mA
				BDV67A	-	-	
				BDV67B	-	-	
				BDV67C	-	-	
				BDV67D	-	-	
$I_{CBO}$	Collector-Base Cutoff Current	$I_B= 0$ $T_j=25^\circ\text{C}$	$V_{CB}= 80\text{ V}$	BDV67	-	-	1 mA
			$V_{CB}= 100\text{ V}$	BDV67A	-	-	
			$V_{CB}= 120\text{ V}$	BDV67B	-	-	
			$V_{CB}= 140\text{ V}$	BDV67C	-	-	
			$V_{CB}= 160\text{ V}$	BDV67D	-	-	
		$I_B= 0$ $T_j=150^\circ\text{C}$	$V_{CB}= 40\text{ V}$	BDV67	-	-	4 mA
			$V_{CB}= 50\text{ V}$	BDV67A	-	-	
			$V_{CB}= 60\text{ V}$	BDV67B	-	-	
			$V_{CB}= 70\text{ V}$	BDV67C	-	-	
			$V_{CB}= 80\text{ V}$	BDV67D	-	-	
$V_{CEO}$	Collector-emitter Breakdown Voltage (*)	$I_C= 30\text{ mA}, I_B= 0$		BDV67	60	-	V
				BDV67A	80	-	
				BDV67B	100	-	
				BDV67C	120	-	
				BDV67D	150	-	
$h_{FE}$	DC Current Gain (*)	$V_{CE}= 3\text{ V}, I_C= 1\text{ A}$		BDV67	-	3000	-
		$V_{CE}= 3\text{ V}, I_C= 10\text{ A}$		BDV67A	1000	-	
		$V_{CE}= 3\text{ V}, I_C= 16\text{ A}$		BDV67B	-	-	
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C= 10\text{ A}, I_B= 40\text{ mA}$		BDV67C	-	-	2 V
				BDV67D	-	-	
				BDV67	-	-	
				BDV67A	-	-	
				BDV67B	-	-	



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### ELECTRICAL CHARACTERISTICS

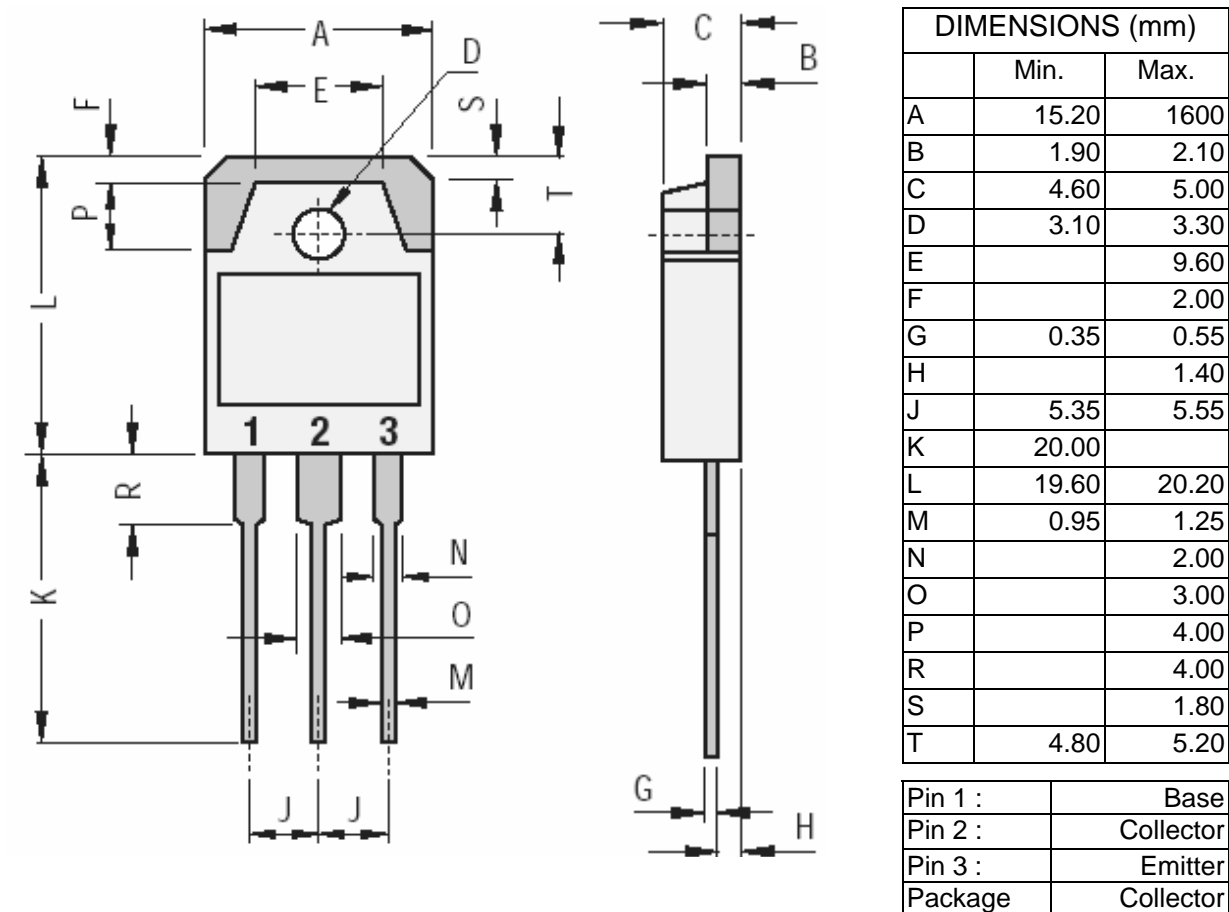
TC=25°C unless otherwise noted

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  $\approx 300 \mu\text{s}$ , Duty Cycle  $\angle 2.0\%$

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### MECHANICAL DATA CASE TO3PN Non Isolated Plastic Package



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