

NPN	PNP
BDV66A	BDV66B
BDV67A	BDV67B
16 Amperes	
Darlington	
Complementary	
Silicon	
Power Transistors	
60V - 100V	
125W	

Features

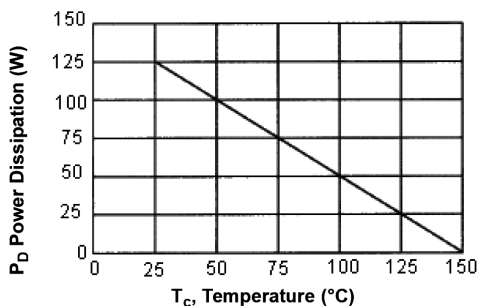
- Collector-Emitter sustaining voltage
 $V_{CE(sus)} = 80V$ (Minimum) - BDV66A, BDV67A
 $= 100V$ (Minimum) - BDV66B, BDV67B
- Collector-Emitter saturation voltage
 $V_{CE(sat)} = 2V$ (Maximum) at $I_C = 10A$
- Monolithic construction with Built-in Base-Emitter shunt resistor

Maximum Ratings

Characteristic	Symbol	BDV66A BDV67A	BDV66B BDV67B	Unit
Collector - Emitter Voltage	V_{CEO}	80	100	V
Collector - Base Voltage	V_{CBO}			
Emitter - Base Voltage	V_{EBO}	5		
Collector Current - Continuous - Peak	I_C I_{CM}	16 20		A
Base Current	I_B	0.25		
Total Power Dissipation at $T_C = 25^\circ C$ Derate above $25^\circ C$	P_D	125 1		W W / $^\circ C$
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-65 to +150		$^\circ C$

Thermal Characteristics

Characteristic	Symbol	Maximum	Unit
Thermal Resistance Junction to case	$R_{\theta JC}$	1	$^\circ C / W$

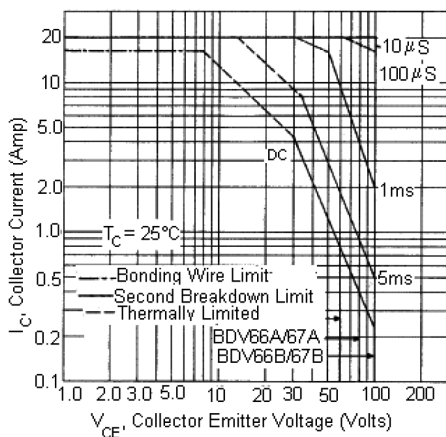


Electrical Characteristics (T_c = 25°C unless otherwise specified)

Characteristic	Symbol	Minimum	Maximum	Unit
OFF Characteristics				
Collector - Emitter Sustaining Voltage (1) (I _c = 0.1A, I _B = 25mH) BDV66A, BDV67A BDV66B, BDV67B	V _{CEO (sus)}	80 100	-	V
Collector Cut off Current (V _{CE} = 40V, I _B = 0) BDV66A, BDV67A (V _{CE} = 50V, I _B = 0) BDV66B, BDV67B	I _{CEO}	-	3	mA
Collector Cut off Current (V _{CB} = 80V, I _E = 0) BDV66A, BDV67A (V _{CB} = 100V, I _E = 0) BDV66B, BDV67B	I _{CBO}	-	0.4	
Emitter Cut off Current (V _{EB} = 5V, I _c = 0)	I _{EBO}	-	5	
ON Characteristics (1)				
Collector - Emitter Saturation Voltage (I _c = 10A, I _B = 40mA)	V _{CE (sat)}	-	2	V
Dynamic Characteristics				
Small-Signal Current Gain (2) (I _c = 5A, V _{CE} = 3V, f = 1kHz)	f _t	6	-	MHz
Output Capacitance (V _{CB} = 10V, I _E = 0, f = 1MHz)	C _{ob}	-	450	pF
Switching Characteristics				
Turn On Time	I _c = 5A, V _{CC} = 12V	t _{on}	1 (typical)	μs
Off Time	I _{B1} = -I _{B2} = 40mA	t _{off}	3.5 (typical)	

1. Pulse Test : Pulse width = 30μs, Duty cycle = 2%
2. f_T = |hFE| • f_{test}

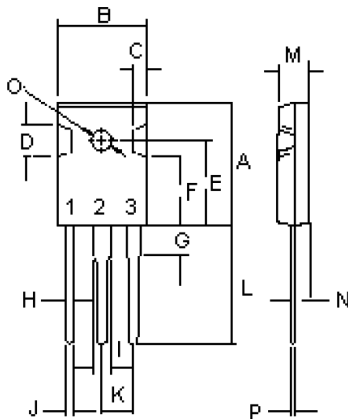
Active-Region Safe Operating Area



There are two limitations on the power handling ability of a transistor: average junction temperature and second breakdown safe operating area curves indicate I_c-V_{CE} limits of the transistor that must be observed for reliable operation i.e., the transistor must not be subjected to greater dissipation than the curves indicate. The data of beside graph is based on T_{J(PK)} = 150°C; T_c is variable depending on conditions.

Second breakdown pulse limits are valid for duty cycles to 10% provided T_{J(PK)} < 150°C. At high case temperatures, thermal limitation will reduce the power that can be handled to values less than the limitations imposed by second breakdown.

Diagram



Dimensions	Minimum	Maximum
A	20.63	22.38
B	15.38	16.2
C	1.9	2.7
D	5.1	6.1
E	14.81	15.22
F	11.72	12.84
G	4.2	4.5
H	1.82	2.46

Dimensions	Minimum	Maximum
I	2.92	3.23
J	0.89	1.53
K	5.26	5.66
L	18.5	21.5
M	4.68	5.36
N	2.4	2.8
O	3.25	3.65
P	0.55	0.7

Dimensions : Millimetres

Part Number Table

Description	Type	Part Number
Darlington Transistors	NPN	BDV67A
		BDV67B
	PNP	BDV66A
		BDV66B

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