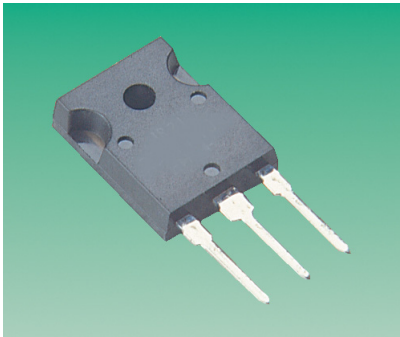


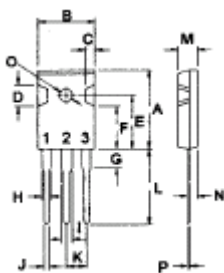
BDV66, 67

Darlington Transistors



Features:

- Collector-Emitter sustaining voltage -
 $V_{CEO(sus)} = 80V$ (Minimum) - BDV66A, BDV67A
 $= 100V$ (Minimum) - BDV66B, BDV67B
- Collector-Emitter saturation voltage
 $V_{CE(sat)} = 2.0V$ (Maximum) at $I_C = 10A$
- Monolithic construction with Built-in Base-Emitter Shunt Resistor.



Pin 1. Base
2. Collector
3. Emitter

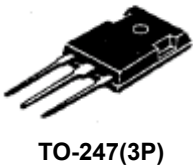
Dimensions	Minimum	Maximum
A	20.63	22.38
B	15.38	16.20
C	1.90	2.70
D	5.10	6.10
E	14.81	15.22
F	11.72	12.84
G	4.20	4.50
H	1.82	2.46
I	2.92	3.23
J	0.89	1.53
K	5.26	5.66
L	18.50	21.50
M	4.68	5.36
N	2.40	2.80
O	3.25	3.65
P	0.55	0.70

Dimensions : Millimetres

PNP
BDV66A
BDV66B

NPN
BDV67A
BDV67B

16 Ampere
Darlington
Complementary Silicon
Power Transistors
60 - 100 Volts
125 Watts



Maximum Ratings

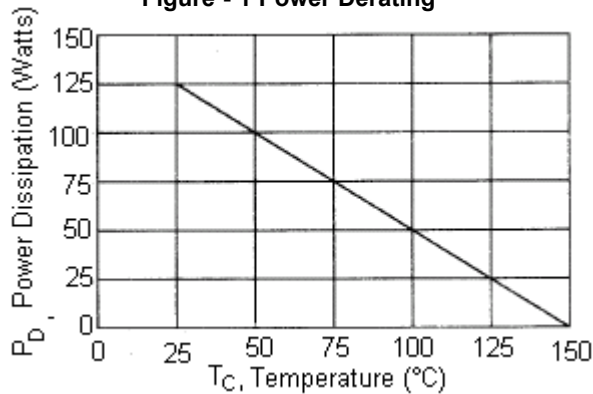
Characteristic	Symbol	BDV66A BDV67A	BDV66B BDV67B	Unit
Collector-Emitter Voltage	V _{CEO}	80	100	V
Collector-Base Voltage	V _{CBO}			
Emitter-Base Voltage	V _{EBO}	5.0		
Collector Current-Continuous -Peak	I _C I _{CM}	16 20		A
Base Current	I _B	0.25		
Total Power Dissipation at T _C = 25°C Derate above 25°C	P _D	125 1.0		W W/°C
Operation and Storage Junction Temperature Range	T _J , T _{STG}	-65 to +150		°C



Thermal Characteristics

Characteristic	Symbol	Maximum	Unit
Thermal Resistance Junction to Case	$R_{\theta jc}$	1.0	°C/W

Figure - 1 Power Derating



Electrical Characteristics ($T_c = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Minimum	Maximum	Unit
OFF Characteristics				
Collector-Emitter Sustaining Voltage (1) (I _C = 0.1A, L = 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}	-	3.0	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} = 5.0V, I _C = 0)	I _{EBO}	-	5.0	
ON Characteristics (1)				
Collector-Emitter Saturation Voltage (I _C = 10A, I _B = 40mA)	V _{CE(sat)}	-	2.0	V
Dynamic Characteristics	-	-	-	-
Small-Signal Current Gain (2) (I _C = 5.0A, V _{CE} = 3.0V, f = 1.0KHz)	f _T	6.0	-	MHz
Output Capacitance (V _{CB} = 10V, I _E = 0, f = 1.0MHz)	C _{ob}	-	450	pF

BDV66, 67

Darlington Transistors

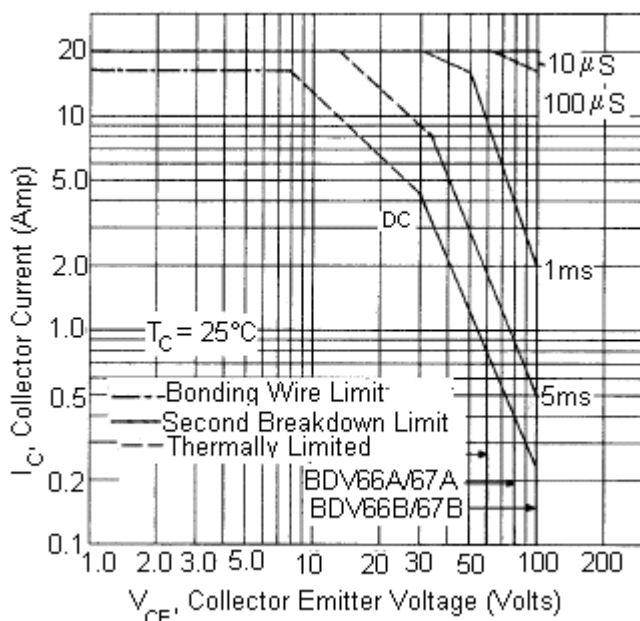


Characteristic	Symbol	Minimum	Maximum	Unit
Switching Characteristics				
Turn On Time	t_{on}	1.0 (typical)	-	μs
Off Time				

(1) Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2.0\%$

(2) $f_T = |h_{FE}| \cdot f_{test}$

Figure - 2 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 Figure-2 is based on $T_{J(PK)} = 150^\circ C$; T_C is variable depending on conditions. Second breakdown pulse limits are valid for duty cycles to 10% provided $T_{J(PK)} < 150^\circ C$. At high case temperatures, thermal limitation will reduce the power that can be handled to values less than the limitations imposed by second breakdown.

Specifications

TYPE	Part Number
NPN	BDV67A
	BDV67B
PNP	BDV66A
	BDV66B

Notes:

International Sales Offices:

**AUSTRALIA – Farnell InOne**

Tel No: ++ 61 2 9645 8888
Fax No: ++ 61 2 9644 7898

**FINLAND – Farnell InOne**

Tel No: ++ 358 9 560 7780
Fax No: ++ 358 9 345 5411

**NETHERLANDS – Farnell InOne**

Tel No: ++ 31 30 241 7373
Fax No: ++ 31 30 241 7333

**SWITZERLAND – Farnell InOne**

Tel No: ++ 41 1 204 64 64
Fax No: ++ 41 1 204 64 54

**AUSTRIA – Farnell InOne**

Tel No: ++ 43 662 2180 680
Fax No: ++ 43 662 2180 670

**FRANCE – Farnell InOne**

Tel No: ++ 33 474 68 99 99
Fax No: ++ 33 474 68 99 90

**NEW ZEALAND – Farnell InOne**

Tel No: ++ 64 9 357 0646
Fax No: ++ 64 9 357 0656

**UK – Farnell InOne**

Tel No: ++ 44 8701 200 200
Fax No: ++ 44 8701 200 201

**BELGIUM – Farnell InOne**

Tel No: ++ 32 3 475 2810
Fax No: ++ 32 3 227 3648

**GERMANY – Farnell InOne**

Tel No: ++ 49 89 61 39 39 39
Fax No: ++ 49 89 613 59 01

**NORWAY – Farnell InOne**

Tel No: ++ 45 44 53 66 66
Fax No: ++ 45 44 53 66 02

**UK – BuckHickman InOne**

++ 44 8450 510 150
++ 44 8450 510 130

**BRAZIL – Farnell-Newark InOne**

Tel No: ++ 55 11 4066 9400
Fax No: ++ 55 11 4066 9410

**HONG KONG – Farnell-Newark InOne**

Tel No: ++ 852 2268 9888
Fax No: ++ 852 2268 9899

**PORTUGAL – Farnell InOne**

Tel No: ++ 34 93 475 8804
Fax No: ++ 34 93 474 5288

**UK – CPC**

++ 44 8701 202 530
++ 44 8701 202 531

**CHINA – Farnell-Newark InOne**

Tel No: ++86 10 6238 5152
Fax No: ++86 10 6238 5022

**IRELAND – Farnell InOne**

Tel No: ++ 353 1 830 9277
Fax No: ++ 353 1 830 9016

**SINGAPORE – Farnell-Newark InOne**

Tel No: ++ 65 6788 0200
Fax No: ++ 65 6788 0300

**EXPORT – Farnell InOne**

Tel No: ++ 44 8701 200 208
Fax No: ++ 44 8701 200 209

For enquiries from all other markets

**DENMARK – Farnell InOne**

Tel No: ++ 45 44 53 66 44
Fax No: ++ 45 44 53 66 06

**ITALY – Farnell InOne**

Tel No: ++ 39 02 93 995 200
Fax No: ++ 39 02 93 995 300

**SPAIN – Farnell InOne**

Tel No: ++ 34 93 475 8805
Fax No: ++ 34 93 474 5107

**ESTONIA – Farnell InOne**

Tel No: ++ 358 9 560 7780
Fax No: ++ 358 9 345 5411

**MALAYSIA – Farnell-Newark InOne**

Tel No: ++ 60 3 7873 8000
Fax No: ++ 60 3 7873 7000

**SWEDEN – Farnell InOne**

Tel No: ++ 46 8 730 50 00
Fax No: ++ 46 8 83 52 62

<http://www.farnellinone.com>

<http://www.buckhickmaninone.com>

<http://www.cpc.co.uk>

Disclaimer This data sheet and its contents (the "Information") belong to the Premier Farnell Group (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp is the registered trademark of the Group. © Premier Farnell plc 2004.