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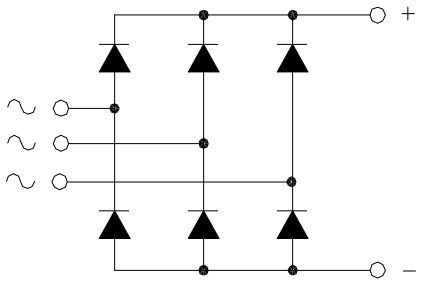
DBM150

POWER RECTIFIER BRIDGE

Output Current **150 A**



V_{RRM}	V_{RSM}	P/N
400	500	DBM150.04
600	700	DBM150.06
800	900	DBM150.08
1200	1300	DBM150.12
1600	1700	DBM150.16

Features

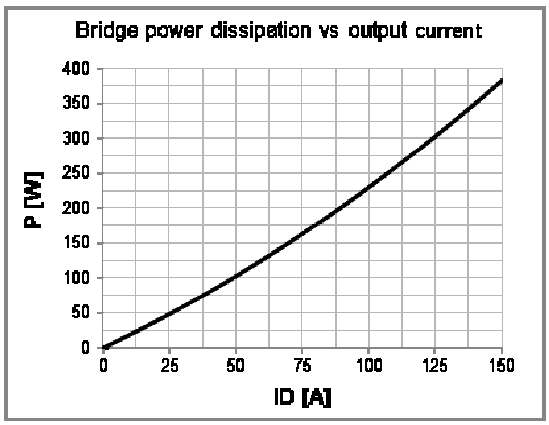
- Low forward voltage diodes for high surge capability
- Low thermal impedance packaging
- Electrically insulated case

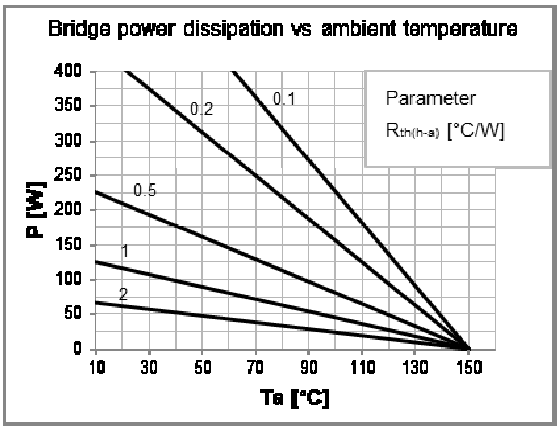
Applications

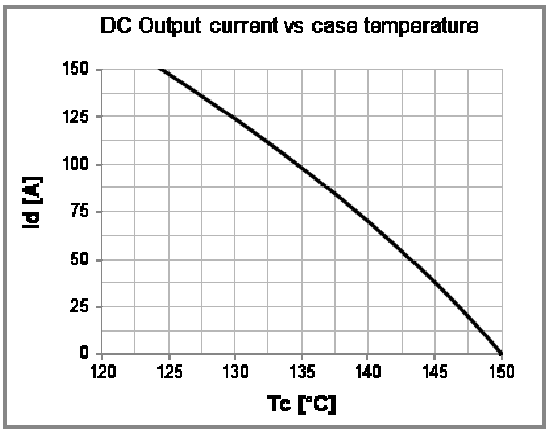
- Input rectifier for variable frequency drives
- Battery charger rectifiers
- Three phase rectifier for power supplies
- Rectifiers for DC motor fields supplies

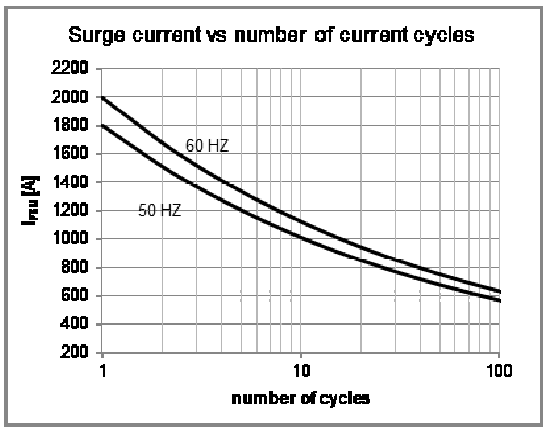
Diodes characteristics		Conditions	Tj [°C]	Value
I_{RRM}	Max repetitive peak reverse current	$V = V_{RRM}$	150	5 mA
$V_{F(TO)}$	Threshold voltage		150	0,9 V
r_F	Forward slope resistance		150	2,5 mΩ
V_{FM}	Peak forward voltage, max	I_F = 150A	25	1,3 V
I_{FSM}	Surge forward current	Half sine wave, 10 ms	150	1800 A
I^2t	Max I^2t for fusing		150	16200 A^2s
T_{jmax}	Operating junction temperature			-40 / 150 °C
$R_{th(j-c)}$	Thermal resistance (junction to case)	DC operation		0,36 °C/W
$R_{th(j-c)}$	Thermal resistance (junction to case)	Rectangular wave 120° conduction		0,40 °C/W

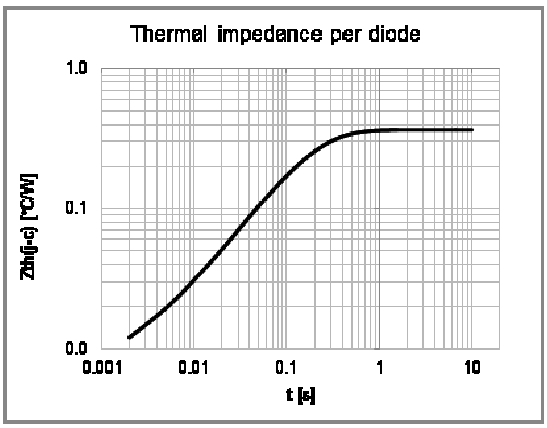
Module characteristics		Conditions	Value
I_D	DC output current	Tc = 124 °C	150 A
I_D	DC output current	Ta = 40 °C ; freely suspended	12 A
V_{INS}	RMS Insulating voltage	50 / 60 Hz t = 1 s (i < 1 mA)	3600 V
V_{INS}	RMS Insulating voltage	50 / 60 Hz t = 60 s (i < 1 mA)	3000 V
$R_{th(j-c)}$	Thermal resistance (junction to case)	DC operation	0,060 °C/W
$R_{th(j-c)}$	Thermal resistance (junction to case)	Rect. wave 120° conduction	0,067 °C/W
$R_{th(c-h)}$	Thermal resistance (case to heatsink)	Mounting surface flat, smooth and greased	0,054 °C/W
$R_{th(j-a)}$	Thermal resistance (junction to ambient)	Freely suspended or mounted on an insulator	8,5 °C/W
$R_{th(j-a)}$	Thermal resistance (junction to ambient)	Mounted on a painted metal sheet 250x250x1 mm	3,0 °C/W
T_{stg}	Max storage temperature		150 °C
M_1	Mounting torque, ± 15 %		4,5 N·m
			40 lb·inch
M_2	Terminal connection torque, ± 15 %		3,0 N·m
			26 lb·inch


Bridge power dissipation vs output current
P [W]
ID [A]
0
50
100
150
200
250
300
350
400
0
25
50
75
100
125
150


Bridge power dissipation vs ambient temperature
P [W]
Ta [°C]
Parameter
Rth(h-a) [°C/W]
0.2
0.1
0.5
1
2
0
50
100
150
200
250
300
350
400
10
30
50
70
90
110
130
150


DC Output current vs case temperature
Id [A]
Tc [°C]
0
25
50
75
100
125
150
120
125
130
135
140
145
150


Surge current vs number of current cycles
IFSM [A]
number of cycles
60 HZ
50 HZ
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
1
10
100


Thermal impedance per diode
Zthj-c [°C/W]
t [s]
0.0
0.1
1.0
0.001
0.01
0.1
1
10

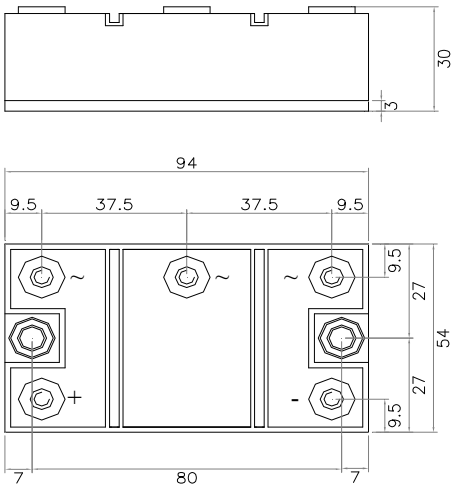


Fig.1 *DBM150.04-SS6-FIX5-HP-P80-TB*
Code:DBM70001500002
DBM150.06-SS6-FIX5-HP-P80-TB
Code:DBM70001500005
DBM150.08-SS6-FIX5-HP-P80-TB
Code:DBM70001500008
DBM150.12-SS6-FIX5-HP-P80-TB
Code:DBM70001500011
DBM150.16-SS6-FIX5-HP-P80-TB
Code:DBM70001500014

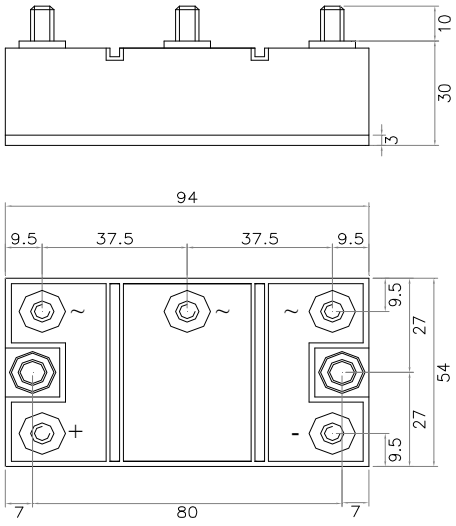


Fig.2 *DBM150.04-MM6x10-FIX5-HP-P80-TB*
Code:DBM70001500000
DBM150.06-MM6x10-FIX5-HP-P80-TB
Code:DBM70001500003
DBM150.08-MM6x10-FIX5-HP-P80-TB
Code:DBM70001500006
DBM150.12-MM6x10-FIX5-HP-P80-TB
Code:DBM70001500009
DBM150.16-MM6x10-FIX5-HP-P80-TB
Code:DBM70001500012

Voltage:04=400V 06=600V 08=800V 12=1200V 16=1600V

Power fix:

SS=Screw (M6)
MM=Bolt (M6)

Mounting fix:

FIX= Ø5,5

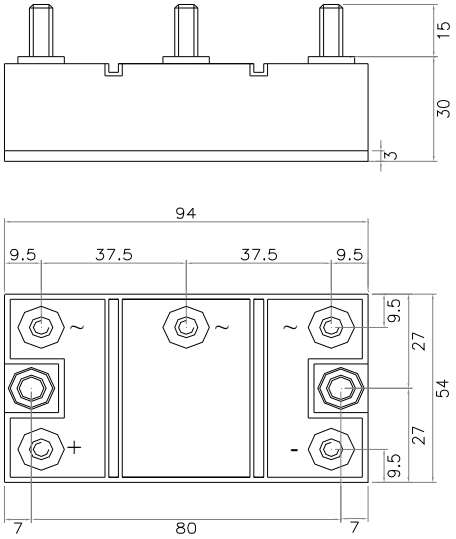


Fig.3 *DBM150.04-MM6x15-FIX5-HP-P80-TB*
Code:DBM70001500001
DBM150.06-MM6x15-FIX5-HP-P80-TB
Code:DBM70001500004
DBM150.08-MM6x15-FIX5-HP-P80-TB
Code:DBM70001500007
DBM150.12-MM6x15-FIX5-HP-P80-TB
Code:DBM70001500010
DBM150.16-MM6x15-FIX5-HP-P80-TB
Code:DBM70001500013

Voltage:04=400V 06=600V 08=800V 12=1200V 16=1600V

Power fix:	***Mounting fix:***
MM=Bolt (M6)	*FIX= Ø5,5*

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