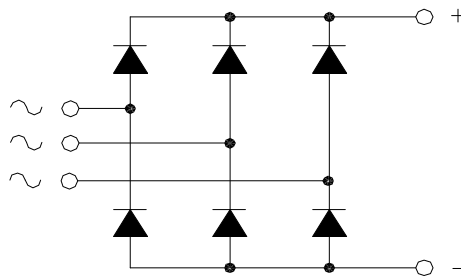




## DBM80-TH

### POWER RECTIFIER BRIDGE

Output Current **80 A**



| $V_{RRM}$ | $V_{RSM}$ | P/N         |
|-----------|-----------|-------------|
| 1600      | 1700      | DBM80.16-TH |

#### Features

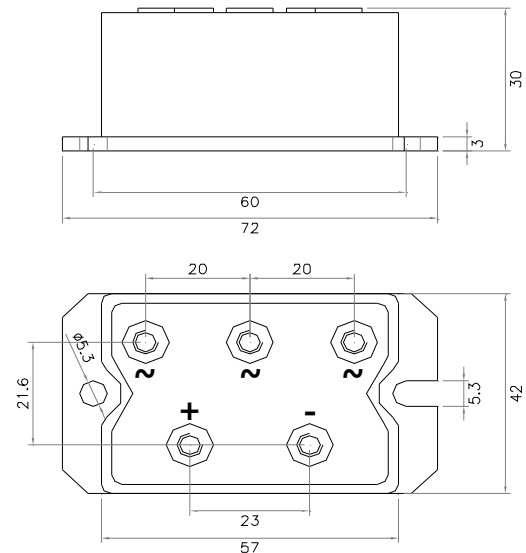
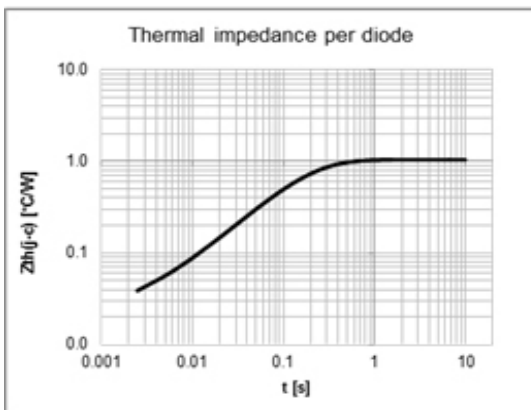
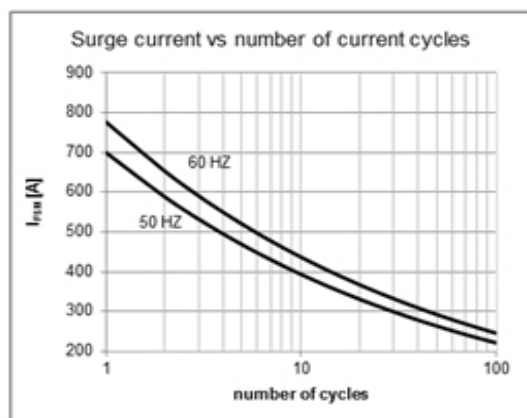
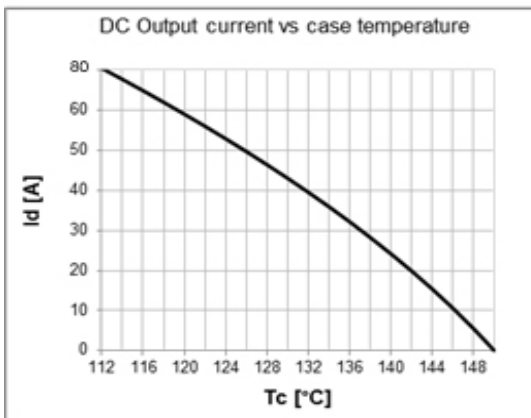
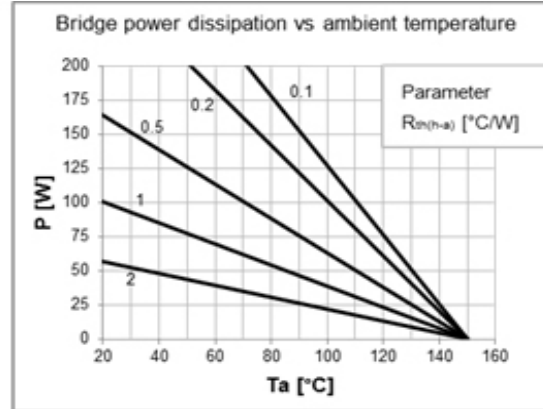
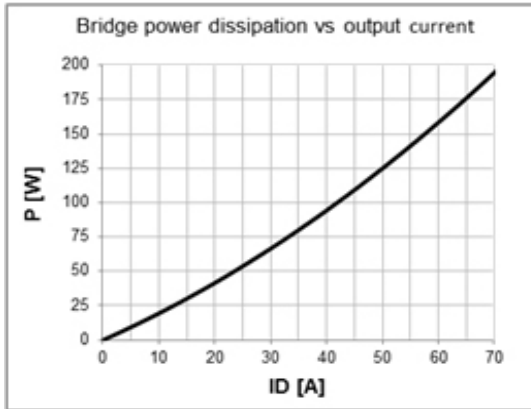
Low forward voltage diodes for high surge capability  
Low thermal impedance packaging  
Electrically insulated case

#### Applications

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

| Diodes characteristics |                                       | Conditions                       | $T_j$ [°C] | Value                 |
|------------------------|---------------------------------------|----------------------------------|------------|-----------------------|
| $I_{RRM}$              | Max repetitive peak reverse current   | $V = V_{RRM}$                    | 150        | 4 mA                  |
| $V_{F(TO)}$            | Threshold voltage                     |                                  | 150        | 0,9 V                 |
| $r_F$                  | Forward slope resistance              |                                  | 150        | 5,0 m $\Omega$        |
| $V_{FM}$               | Peak forward voltage, max             | $I_F = 100A$                     | 25         | 1,7 V                 |
| $I_{FSM}$              | Surge forward current                 | Half sine wave, 10 ms            | 150        | 900 A                 |
| $I^2t$                 | Max $I^2t$ for fusing                 |                                  | 150        | 4800 A <sup>2</sup> s |
| $T_{jmax}$             | Operating junction temperature        |                                  |            | -40 / 150 °C          |
| $R_{th(j-c)}$          | Thermal resistance (junction to case) | DC operation                     |            | 0,68 °C/W             |
| $R_{th(j-c)}$          | Thermal resistance (junction to case) | Rectangular wave 120° conduction |            | 0,71 °C/W             |

| Module characteristics |                                          | Conditions                                    | Value                 |
|------------------------|------------------------------------------|-----------------------------------------------|-----------------------|
| $I_D$                  | DC output current                        | $T_c = 112$ °C                                | 80 A                  |
| $I_D$                  | DC output current                        | $T_a = 40$ °C ; freely suspended              | 7 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                                  | 0,110 °C/W            |
| $R_{th(j-c)}$          | Thermal resistance (junction to case)    | Rect. wave 120° conduction                    | 0,122 °C/W            |
| $R_{th(c-h)}$          | Thermal resistance (case to heatsink)    | Mounting surface flat, smooth and greased     | 0,092 °C/W            |
| $R_{th(j-a)}$          | Thermal resistance (junction to ambient) | Freely suspended or mounted on an insulator   | 8,8 °C/W              |
| $R_{th(j-a)}$          | Thermal resistance (junction to ambient) | Mounted on a painted metal sheet 250x250x1 mm | 3,3 °C/W              |
| $T_{stg}$              | Max storage temperature                  |                                               | 150 °C                |
| $M_1$                  | Mounting torque, $\pm 15$ %              |                                               | 4,5 N·m<br>40 lb·inch |
| $M_2$                  | Terminal connection torque, $\pm 15$ %   |                                               | 3,0 N·m<br>26 lb·inch |



### Notes :

To reduce the thermal resistance we recommend to apply a layer of 100..200µm of thermal compound to the heat sink or to the module base.

The flatness tolerance of IMS is 80µm.

**DBM80.16-SS5-FIX5-XP-P60-TH**  
Code:DBM70000800000

RADDITAL srl reserves the right to change any specification without notice

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