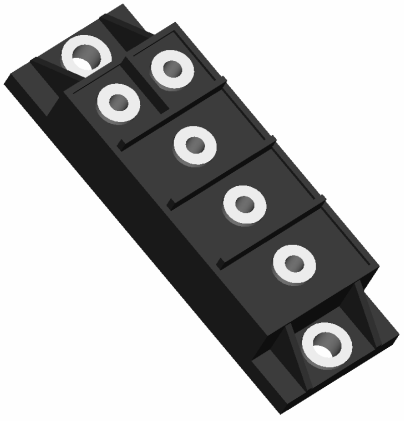
**Green Power Solutions srl**
Via Venezia 34D - 10088 Volpiano (TO), Italy

Phone: +39-011-988 2251
Fax: +39-011-988 1358
Web: www.gpsemi.it
e-mail: info@gpsemi.it



# GMG316D09

## THREE-PHASE RECTIFIER BRIDGE

Low thermal resistance
Electrically insulated package
High output current

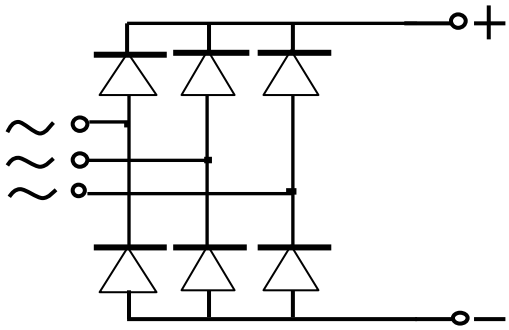
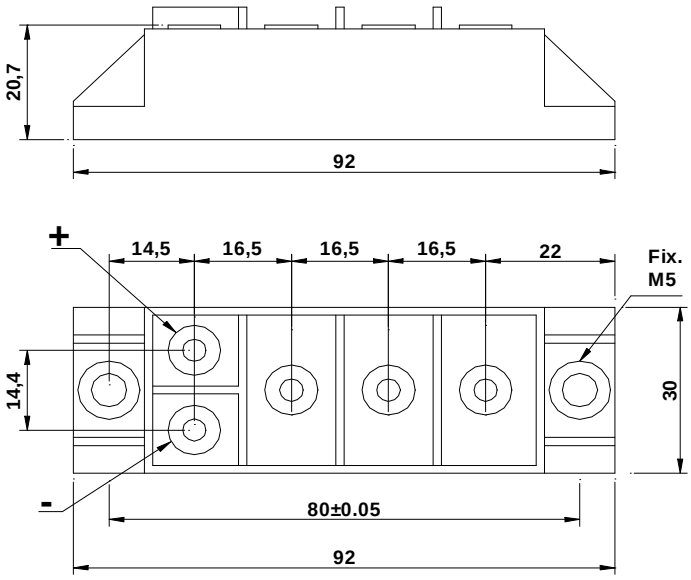
**VOLTAGE UP TO 1600 V**
**OUTPUT CURRENT UP TO 90 A**

### BLOCKING CHARACTERISTICS

| Characteristic | | Conditions | Value |
|---|---|---|---|
| $V_{RRM}$ | Repetitive peak reverse voltage | | 1600 V |
| $V_{RSM}$ | Repetitive peak off-state voltage | | 1700 V |
| $I_{RRM}$ | Repetitive peak reverse current, max. | $V_R$, single phase, half wave, Tj = Tjmax | 4 mA |
| $V_{INS}$ | RMS insulation voltage | Any terminal to base - 60 s | 2000 V |
| | | | |

### FORWARD CHARACTERISTICS

| | | | |
|---|---|---|---|
| $I_{O(AV)}$ | Average DC output current | Tc = 108 ℃ | 90 A |
| $I_{FSM}$ | Surge current | Non rep. half sine wave, 50 Hz, $V_R$ = 0 V, $T_j = T_{jmax}$ | 930 A |
| $I^2t$ | $I^2$ t for fusing coordination | | 3.18 $kA^2s$ |
| $V_{F(TO)}$ | Threshold voltage | $T_j$ = 25℃ | 1.0 V |
| $r_F$ | Forward slope resistance | $T_j$ = 25℃ | 3.91 mΩ |
| $V_{FM}$ | Forward voltage, max | Forward current $I_F$ = 100 A, Tj = 25℃ | 1.36 V |
| | | | |

### THERMAL AND MECHANICAL CHARACTERISTICS

| | | | |
|---|---|---|---|
| $R_{th(j-c)}$ | Thermal resistance (junction to case) | Per bridge | 0.17 ℃/W |
| $R_{th(c-h)}$ | Thermal resistance (case to heatsink) | | 0.12 ℃/W |
| $T_{jmax}$ | Operating junction temperature | | -40 / 150 ℃ |
| $M_1$ | Mounting torque +/- 15% | Module to heatsink (M5) | 4.5 N·m |
| $M_2$ | Mounting torque +/- 15% | Busbar to terminal (M5) | 3.0 N·m |
| | Mass | | 100 g |