

# SKDH 230



**SEMIPONT® 7**

## Half Controlled Bridge Rectifier

### SKDH 230

Preliminary Data

### Features

- Robust plastic case with screw terminals
- Heat transfer through aluminium oxide ceramic isolated metal base plate
- Blocking voltage up to 1800V
- High surge current
- lead free solder
- UL -recognition applied for file no. E 63 532

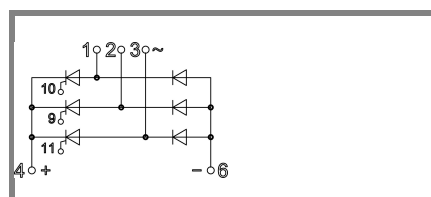
### Typical Applications

- Power supplies for electronic equipment
- Field rectifiers for DC motors
- Battery charger rectifiers

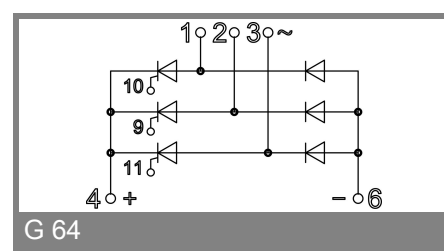
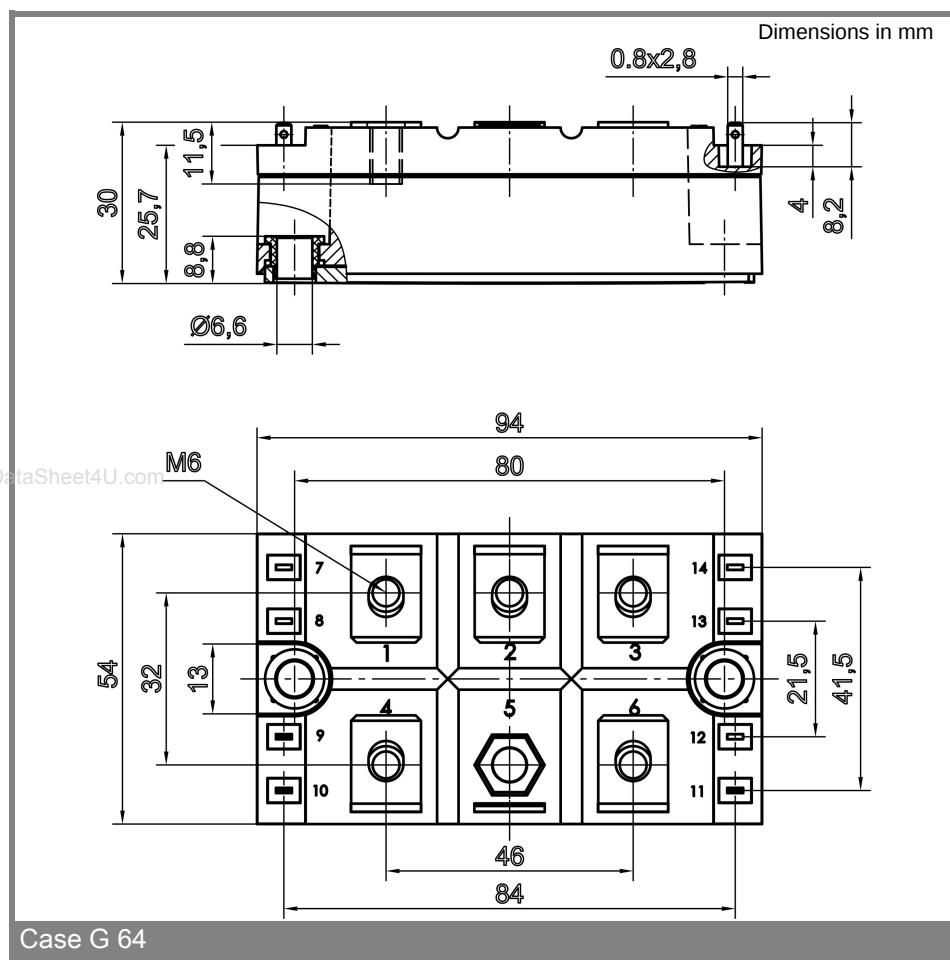
1) available on request

| $V_{RSM}$<br>V | $V_{RRM}, V_{DRM}$<br>V | $I_D = 230$ A (full conduction)<br>( $T_c = 85$ °C) |
|----------------|-------------------------|-----------------------------------------------------|
| 900            | 800                     | SKDH 230/08                                         |
| 1300           | 1200                    | SKDH 230/12                                         |
| 1700           | 1600                    | SKDH 230/16                                         |
| 1900           | 1800                    | SKDH 230/18 <sup>1)</sup>                           |

| Symbol             | Conditions                                              | Values         | Units |
|--------------------|---------------------------------------------------------|----------------|-------|
| $I_D$              | $T_c = 100$ °C                                          | 175            | A     |
| $I_D$              | $T_c = 85$ °C                                           | 230            | A     |
| $I_{TSM}, I_{FSM}$ | $T_{vj} = 25$ °C; 10 ms                                 | 2100           | A     |
|                    | $T_{vj} = 130$ °C; 10 ms                                | 1700           | A     |
| $i^2t$             | $T_{vj} = 25$ °C; 8,3 ... 10 ms                         | 22050          | A²s   |
|                    | $T_{vj} = 130$ °C; 8,3 ... 10 ms                        | 14450          | A²s   |
| $V_T, V_F$         | $T_{vj} = 25$ °C; $I_T, I_F = 300$ A                    | max. 1,9       | V     |
| $V_{T(TO)}$        | $T_{vj} = 130$ °C;                                      | 0,9            | V     |
| $r_T$              | $T_{vj} = 130$ °C                                       | 4,2            | mΩ    |
| $I_{DD}, I_{RD}$   | $T_{vj} = 130$ °C; $V_{DD} = V_{DRM}; V_{RD} = V_{RRM}$ | max. 20        | mA    |
| $t_{gd}$           | $T_{vj} = 25$ °C; $I_G = 1$ A; $di_G/dt = 1$ A/μs       | 1              | μs    |
| $t_{gr}$           | $V_D = 0,67 \cdot V_{DRM}$                              | 2              | μs    |
| $(dv/dt)_{cr}$     | $T_{vj} = 130$ °C                                       | max. 1000      | V/μs  |
| $(di/dt)_{cr}$     | $T_{vj} = 130$ °C; $f = 50$ Hz                          | max. 200       | A/μs  |
| $t_q$              | $T_{vj} = 130$ °C; typ.                                 | 200            | μs    |
| $I_H$              | $T_{vj} = 25$ °C; typ. / max.                           | 150 / 200      | mA    |
| $I_L$              | $T_{vj} = 25$ °C; $R_G = 33$ Ω                          | 300 / 600      | mA    |
| $V_{GT}$           | $T_{vj} = 25$ °C; d.c.                                  | min. 3         | V     |
| $I_{GT}$           | $T_{vj} = 25$ °C; d.c.                                  | min. 200       | mA    |
| $V_{GD}$           | $T_{vj} = 130$ °C; d.c.                                 | max. 0,25      | V     |
| $I_{GD}$           | $T_{vj} = 130$ °C; d.c.                                 | max. 10        | mA    |
| $R_{th(j-c)}$      | per diode / per thyristor                               | 0,32           | K/W   |
|                    | total                                                   | 0,0533         | K/W   |
| $R_{th(c-s)}$      | total                                                   | 0,03           | K/W   |
| $T_{vj}$           |                                                         | - 40 ... + 130 | °C    |
| $T_{stg}$          |                                                         | - 40 ... + 125 | °C    |
| $V_{isol}$         | a. c. 50 Hz; r.m.s.; 1 s / 1 min.                       | 3600 ( 3000 )  | V     |
| $M_s$              | to heatsink                                             | 5 ± 15%        | Nm    |
| $M_t$              | to terminals                                            | 5 ± 15%        | Nm    |
| m                  | approx.                                                 | 250            | g     |
| Case               |                                                         | G 64           |       |



**SKDH**



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