



SEMIPACK® 1

Modules with Thyristor and Free-Wheeling Diode

SKNH 56

Features

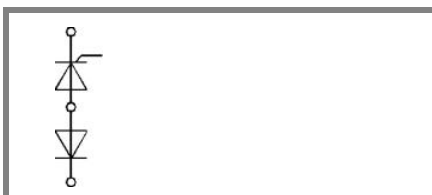
- Heat transfer through ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- UL recognized, file no. E 63 532
- Electrical data see also data sheet SKKH 57

Typical Applications

- Special modules for DC braking of AC induction motors

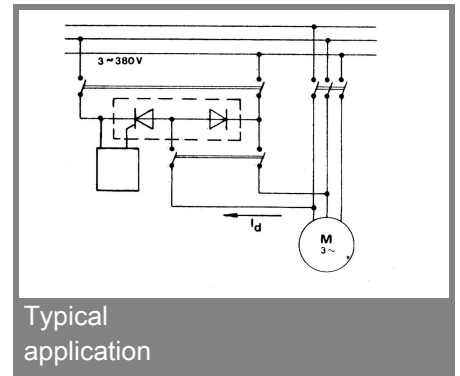
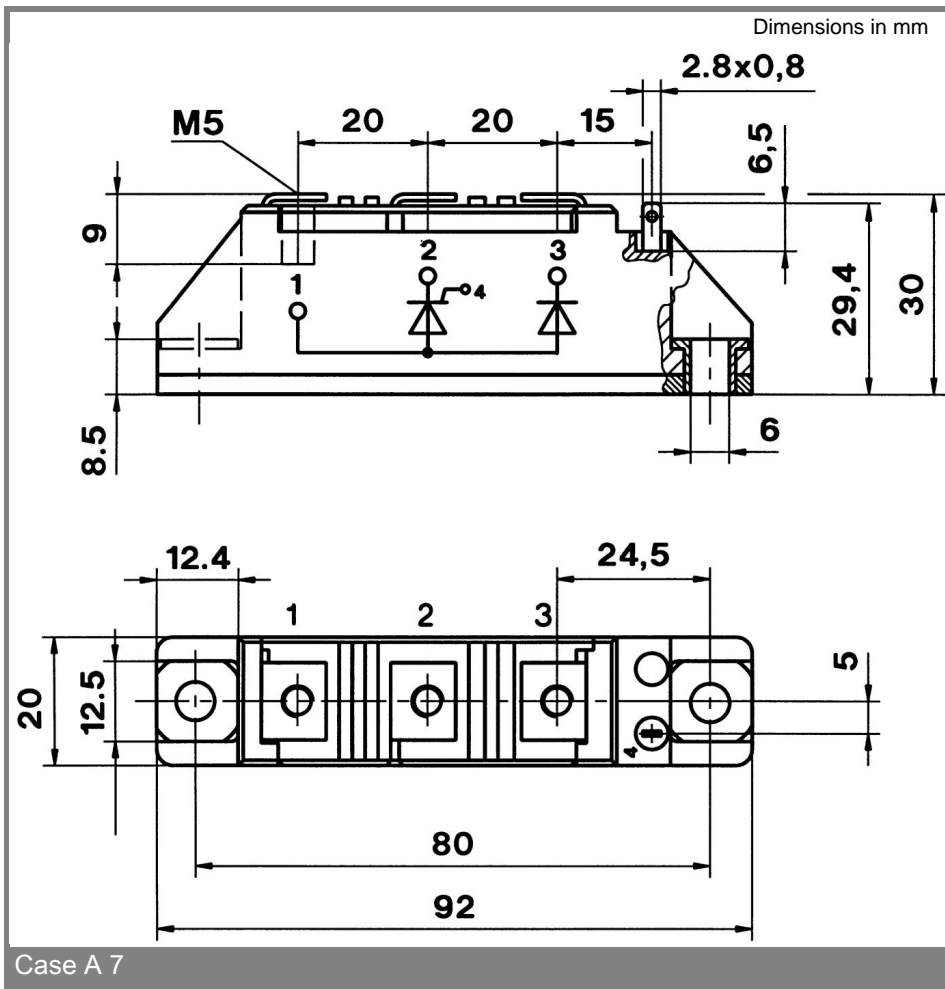
| V_{RSM} V | V_{RRM}, V_{DRM} V | $I_{TRMS} = 95$ A (maximum value for continuous operation) $I_{TAV} = 50$ A (sin. 180; $T_c = 85$ °C) | |
|----------------|-------------------------|--|--|
| 1300 | 1200 | SKNH 56/12E | |
| 1500 | 1400 | SKNH 56/14E | |
| 1700 | 1600 | SKNH 56/16E | |
| 1900 | 1800 | SKNH 56/18E | |

| Symbol | Conditions | Values | Units |
|------------------|--|----------------|------------------|
| I_{TAV} | sin. 180; $T_c = 85$ (100) °C | 50 (35) | A |
| I_D | P3/120; $T_a = 45$ °C; | 70 | A |
| I_{TSM} | $T_{vj} = 25$ °C; 10 ms | 1500 | A |
| | $T_{vj} = 125$ °C; 10 ms | 1250 | A |
| i^2t | $T_{vj} = 25$ °C; 8,3 ... 10 ms | 11000 | A ² s |
| | $T_{vj} = 125$ °C; 8,3 ... 10 ms | 8000 | A ² s |
| V_T | $T_{vj} = 25$ °C; $I_T = 200$ A | max. 1,65 | V |
| $V_{T(TO)}$ | $T_{vj} = 125$ °C | 0,9 | V |
| r_T | $T_{vj} = 125$ °C | 3,5 | mΩ |
| $I_{DD}; I_{RD}$ | $T_{vj} = 25$ °C; $V_{RD} = V_{RRM}; V_{DD} = V_{DRM}$ | max. 15 | mA |
| t_{gd} | $T_{vj} = 25$ °C; $I_G = 1$ A; $di_G/dt = 1$ A/μs | 1 | μs |
| t_{gr} | $V_D = 0,67 * V_{DRM}$ | 2 | μs |
| $(di/dt)_{cr}$ | $T_{vj} = 125$ °C | max. 100 | A/μs |
| $(dv/dt)_{cr}$ | $T_{vj} = 125$ °C | max. 1000 | V/μs |
| t_q | $T_{vj} = 125$ °C | 50 ... 150 | μs |
| I_H | $T_{vj} = 25$ °C; typ. / max. | / 250 | mA |
| I_L | $T_{vj} = 25$ °C; $R_G = 33$ Ω; typ. / max. | / 600 | mA |
| V_{GT} | $T_{vj} = 25$ °C; d.c. | min. 3 | V |
| I_{GT} | $T_{vj} = 25$ °C; d.c. | min. 150 | mA |
| V_{GD} | $T_{vj} = 125$ °C; d.c. | max. 0,25 | V |
| I_{GD} | $T_{vj} = 125$ °C; d.c. | max. 6 | mA |
| $R_{th(j-c)}$ | cont.; per thyristor / per diode | 0,57 | K/W |
| $R_{th(j-c)}$ | sin. 180; per thyristor / per diode | 0,6 | K/W |
| $R_{th(j-c)}$ | sin. 180; per module | 0,3 | K/W |
| $R_{th(c-s)}$ | per thyristor / per module | 0,2 / 0,1 | K/W |
| T_{vj} | | - 40 ... + 125 | °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 |
| a | | 5 * 9,81 | m/s ² |
| m | approx. | 120 | g |
| Case | | A 7 | |



SKNH

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