



SEMIPACK® 2

Thyristor / Diode Modules

SKKT 162

SKKH 162

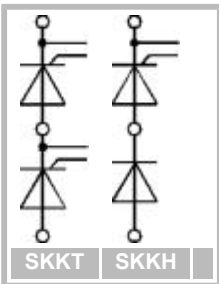
Features

- Heat transfer through aluminium oxide ceramic isolated metal baseplate
- Hard soldered joints for high reliability
- UL recognized, file no. E 63 532

Typical Applications

- DC motor control (e. g. for machine tools)
- Temperature control (e. g. for ovens, chemical processes)
- Professional light dimming (studios, theaters)

¹⁾ See the assembly instructions



| V_{RSM} | V_{RRM} , V_{DRM} | $I_{TRMS} = 250 \text{ A}$ (maximum value for continuous operation) | |
|-----------|--------------------------|---|--------------|
| V | V | $I_{TAV} = 160 \text{ A}$ (sin.180; $T_c = 83 \text{ }^\circ\text{C}$) | |
| 900 | 800 | SKKT 162/08E | SKKH 162/08E |
| 1300 | 1200 | SKKT 162/12E | SKKH 162/12E |
| 1500 | 1400 | SKKT 162/14E | SKKH 162/14E |
| 1700 | 1600 | SKKT 162/16E | SKKH 162/16E |
| 1900 | 1800 | SKKT 162/18E | SKKH 162/18E |

| Symbol | Conditions | Values | Units |
|---------------------|--|-----------------------------|------------------------|
| I_{TAV} | sin. 180; $T_c = 85$ (100) $^\circ\text{C}$ | 156 (110) | A |
| I_D | P3/180F; $T_a = 35 \text{ }^\circ\text{C}$; B2 / B6 | 190 / 230 | A |
| I_{RMS} | P3/180F; $T_a = 35 \text{ }^\circ\text{C}$; W1 / W3 | 265 / 3 * 185 | A |
| I_{TSM} | $T_{vj} = 25 \text{ }^\circ\text{C}$; 10 ms | 5400 | A |
| | $T_{vj} = 125 \text{ }^\circ\text{C}$; 10 ms | 5000 | A |
| i_{2t} | $T_{vj} = 25 \text{ }^\circ\text{C}$; 8,3 ... 10 ms | 145000 | A^2s |
| | $T_{vj} = 125 \text{ }^\circ\text{C}$; 8,3 ... 10 ms | 125000 | A^2s |
| V_T | $T_{vj} = 25 \text{ }^\circ\text{C}$; $I_T = 500 \text{ A}$ | max. 1,6 | V |
| $V_{T(TO)}$ | $T_{vj} = 125 \text{ }^\circ\text{C}$ | max. 0,85 | V |
| r_T | $T_{vj} = 125 \text{ }^\circ\text{C}$ | max. 1,5 | $\text{m}\bullet$ |
| I_{DD} ; I_{RD} | $T_{vj} = 125 \text{ }^\circ\text{C}$; $V_{RD} = V_{RRM}$; $V_{DD} = V_{DRM}$ | max. 40 | mA |
| t_{gd} | $T_{vj} = 25 \text{ }^\circ\text{C}$; $I_G = 1 \text{ A}$; $di_G/dt = 1 \text{ A}/\mu\text{s}$ | 1 | μs |
| t_{gr} | $V_D = 0,67 * V_{DRM}$ | 2 | μs |
| $(di/dt)_{cr}$ | $T_{vj} = 125 \text{ }^\circ\text{C}$ | max. 200 | $\text{A}/\mu\text{s}$ |
| $(dv/dt)_{cr}$ | $T_{vj} = 125 \text{ }^\circ\text{C}$ | max. 1000 | $\text{V}/\mu\text{s}$ |
| t_q | $T_{vj} = 125 \text{ }^\circ\text{C}$ | 50 ... 150 | μs |
| I_H | $T_{vj} = 25 \text{ }^\circ\text{C}$; typ. / max. | 150 / 400 | mA |
| I_L | $T_{vj} = 25 \text{ }^\circ\text{C}$; $R_G = 33 \bullet$; typ. / max. | 300 / 1000 | mA |
| V_{GT} | $T_{vj} = 25 \text{ }^\circ\text{C}$; d.c. | min. 2 | V |
| I_{GT} | $T_{vj} = 25 \text{ }^\circ\text{C}$; d.c. | min. 150 | mA |
| V_{GD} | $T_{vj} = 125 \text{ }^\circ\text{C}$; d.c. | max. 0,25 | V |
| I_{GD} | $T_{vj} = 125 \text{ }^\circ\text{C}$; d.c. | max. 10 | mA |
| $R_{th(j-c)}$ | cont.; per thyristor / per module | 0,17 / 0,085 | K/W |
| $R_{th(j-c)}$ | sin. 180; per thyristor / per module | 0,18 / 0,09 | K/W |
| $R_{th(j-c)}$ | rec. 120; per thyristor / per module | 0,2 / 0,1 | K/W |
| $R_{th(c-s)}$ | per thyristor / per module | 0,1 / 0,05 | K/W |
| T_{vj} | | - 40 ... + 125 | $^\circ\text{C}$ |
| T_{stg} | | - 40 ... + 125 | $^\circ\text{C}$ |
| V_{isol} | a. c. 50 Hz; r.m.s.; 1 s / 1 min. | 3600 / 3000 | V~ |
| M_s | to heatsink | $5 \pm 15 \%$ ¹⁾ | Nm |
| M_t | to terminal | $5 \pm 15 \%$ | Nm |
| a | | $5 * 9,81$ | m/s^2 |
| m | approx. | 165 | g |
| Case | SKKT | A 21 | |
| | SKKH | A 22 | |

Diagrams