

### SKKT330,SKKH330

#### Features

- Heat transfer through aluminium oxide ceramic isolated metal
- Precious metal pressure contacts for high reliability
- Thyristor with amplifying gate

#### Typical Applications

- Various rectifiers
- AC/DC Motor drives
- DC supply for PWM inverter



| Symbol    | IRMS=510A (maximum value for continuous operation)<br>ITAV=330A (sin.180; Tc=80°C) |             |             |             |             |             |             |             | Units |
|-----------|------------------------------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------|
|           | SKKT330/08E                                                                        | SKKT330/12E | SKKT330/16E | SKKT330/18E | SKKH330/08E | SKKH330/12E | SKKH330/16E | SKKH330/18E |       |
| VRRM,VDRM | 800                                                                                | 1200        | 1600        | 1800        | 800         | 1200        | 1600        | 1800        | V     |
| VRSM      | 900                                                                                | 1300        | 1700        | 1900        | 900         | 1300        | 1700        | 1900        | V     |

#### Electrical characteristics

| Symbol    | Conditions                         | Values      | Units |
|-----------|------------------------------------|-------------|-------|
| ITAV      | sin. 180; Tc=85(100)°C;            | 305(225)    | A     |
| Id        | P16/200F. Ta=35°C; B2/B6           | 520/650     | A     |
| IRMS      | P16/200F. Ta=35°C; W1/W3;          | 585/3*485   | A     |
| ITSM      | Tvj=25°C; 10ms                     | 9500        | A     |
|           | Tvj=130°C; 10ms                    | 8000        | A     |
| I²t       | Tvj=25°C; 8.3...10ms               | 451000      | A²s   |
|           | Tvj=130°C; 8.3...10ms              | 320000      | A²s   |
| VT        | Tvj=25°C, IT=750A                  | max. 1.4    | V     |
| VT(TO)    | Tvj=130°C                          | max. 0.8    | V     |
| rT        | Tvj=130°C                          | max. 0.6    | mΩ    |
| IDD;IRD   | Tvj=130°C, VRD=VRRM; VDD=VDRM      | max. 80     | mA    |
| tgd       | Tvj=25°C; Ig=1A; di/dt=1A/μs       | 1           | μs    |
| tgr       | VD=0.67*VDRM                       | 2           | μs    |
| (dv/dt)cr | Tvj=130°C                          | max. 1000   | V/μs  |
| (di/dt)cr | Tvj=130°C                          | max. 250    | A/μs  |
| tq        | Tvj=130°C                          | 50...150    | μs    |
| IH        | Tvj=25°C; typ./max.                | 150/500     | mA    |
| IL        | Tvj=25°C; Rg=33Ω; typ./max.        | 300/2000    | mA    |
| VGT       | Tvj=25°C; d.c                      | min. 3      | V     |
| IGT       | Tvj=25°C; d.c                      | min. 200    | mA    |
| VGD       | Tvj=130°C; d.c                     | max. 0.25   | V     |
| IGD       | Tvj=130°C; d.c                     | max. 10     | mA    |
| Rth(j-c)  | cont. per thyristor/per module     | 0.11/0.055  | K/W   |
| Rth(j-c)  | sin. 180; per thyristor/per module | 0.116/0.058 | K/W   |
| Rth(j-c)  | rec. 120; per thyristor/per module | 0.13/0.65   | K/W   |
| Rth(j-s)  | per thyristor/per module           | 0.04/0.02   | K/W   |
| Tvj       |                                    | -40...+130  | °C    |
| Tstg      |                                    | -40...+130  | °C    |
| Visol     | a.c. 50Hz; r.m.s; 1s/1min.         | 3600/3000   | V~    |
| Ms        | to heatsink                        | 5±15%¹)     | Nm    |
| Mt        | to terminals                       | 9±15%       | Nm    |
| a         |                                    | 5*9.81      | m/s²  |
| m         | approx.                            | 600         | g     |

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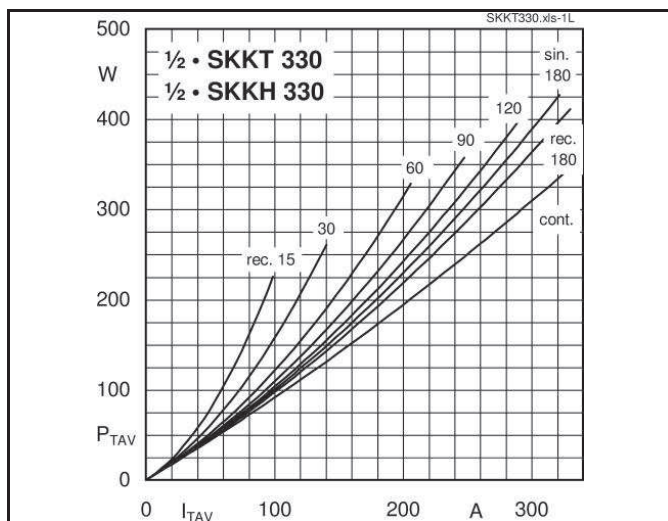


Fig. 1L Power dissipation per thyristor vs. on-state current

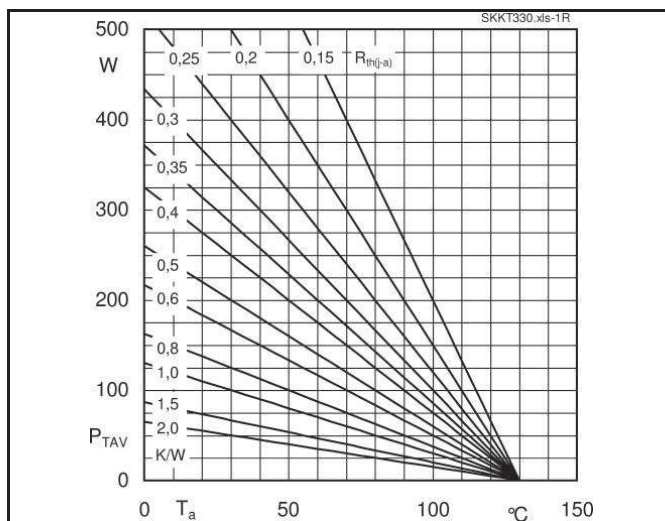


Fig. 1R Power dissipation per thyristor vs. ambient temp.

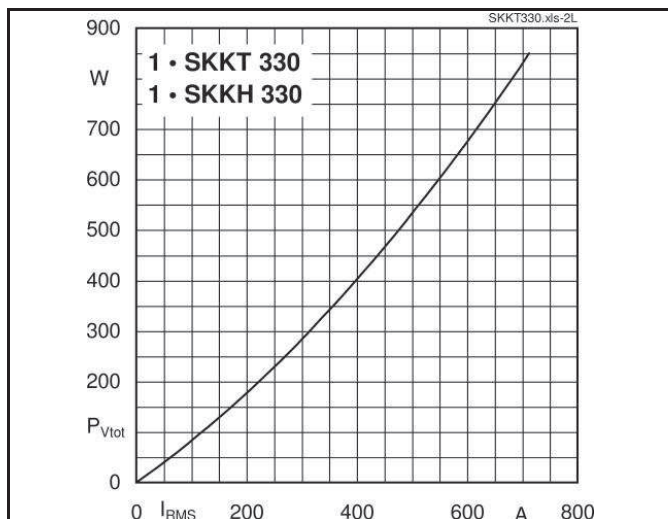


Fig. 2L Power dissipation per module vs. rms current

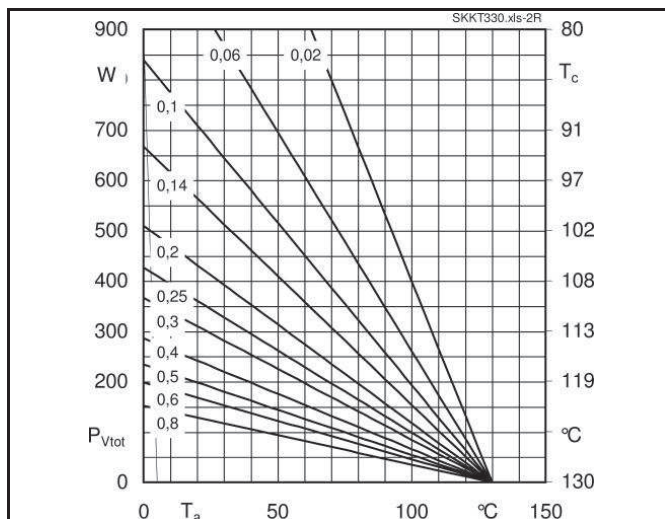


Fig. 2R Power dissipation per module vs. case temp.

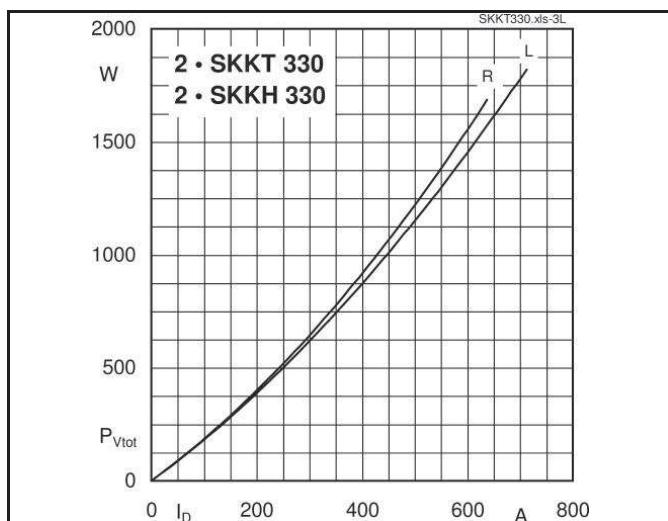


Fig. 3L Power dissipation of two modules vs. direct current

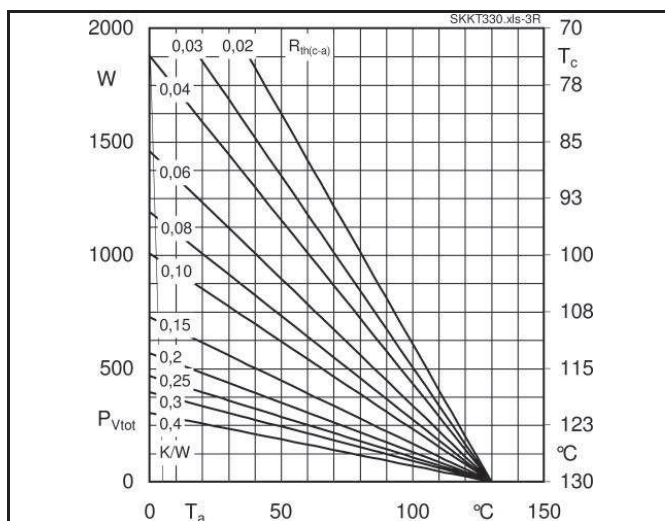
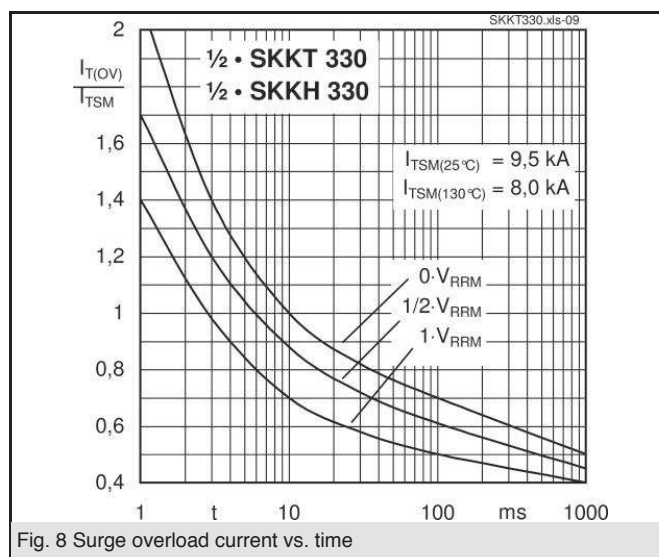
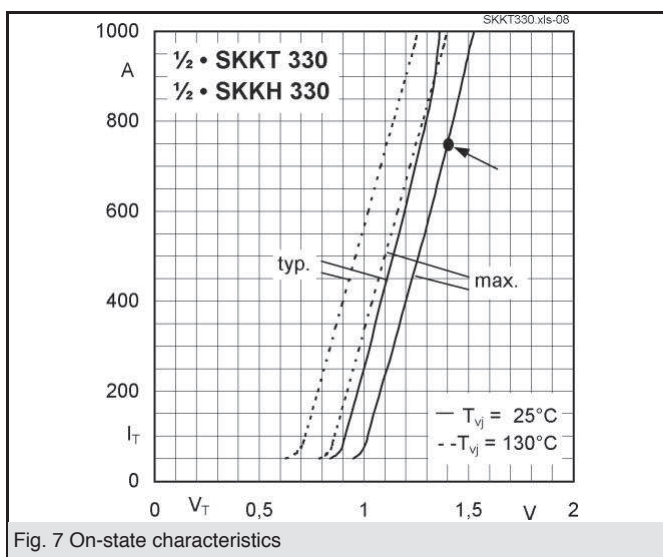
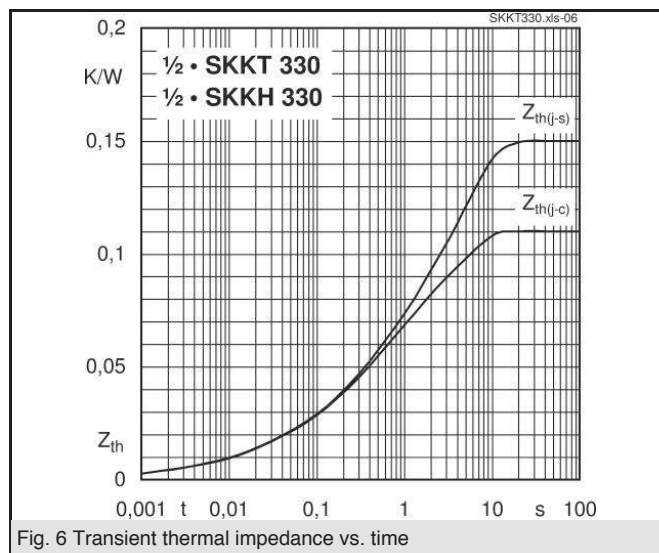
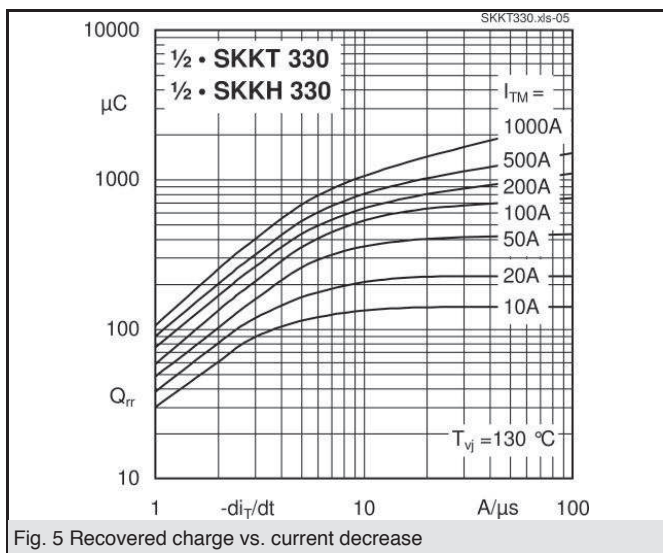
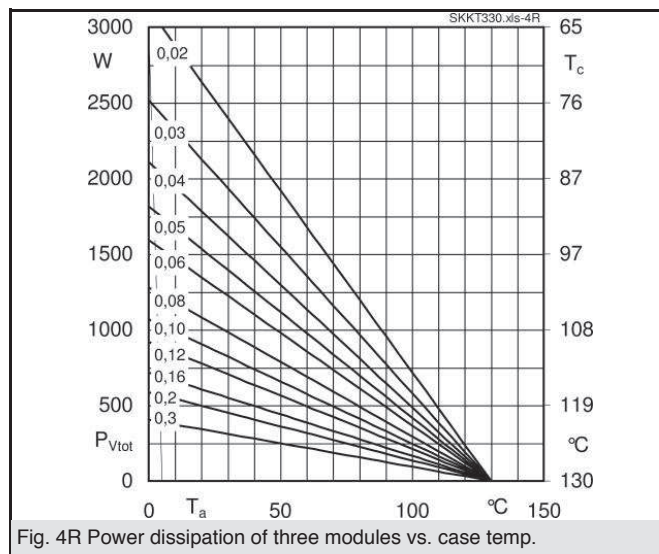
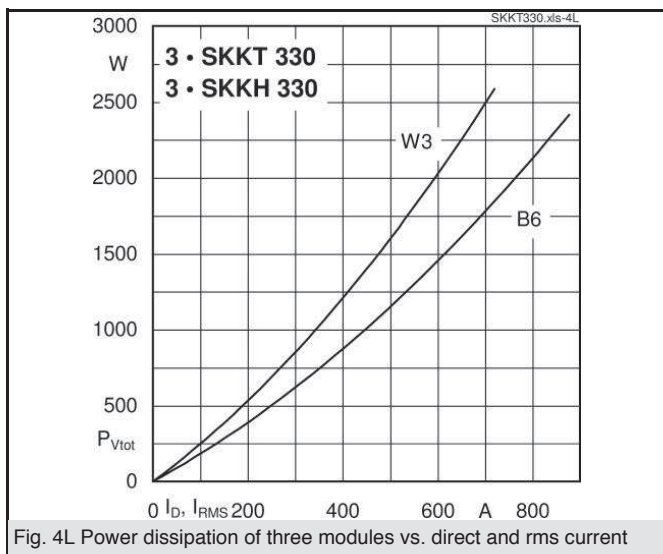


Fig. 3R Power dissipation of two modules vs. case temp.

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