

SKKT57,SKKH57,SKKT57B

Features

- ▶ Heat transfer through aluminium oxide ceramic isolated metal
- ▶ Hard soldered joints for high reliability
- ▶ Space and weight savings

Typical Applications

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

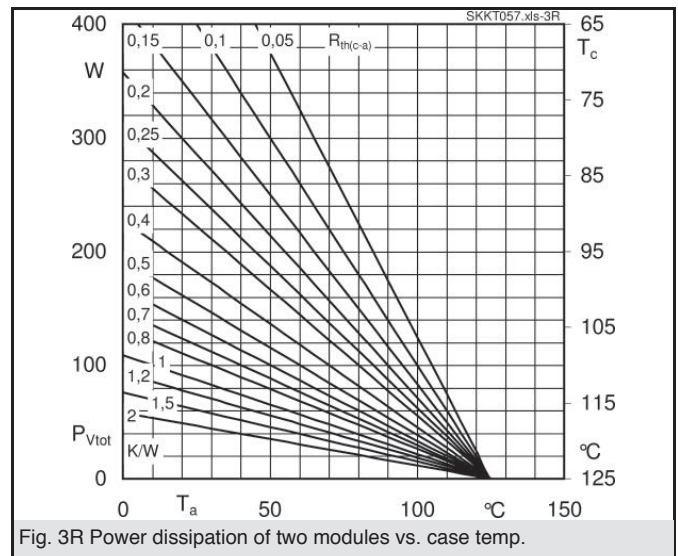
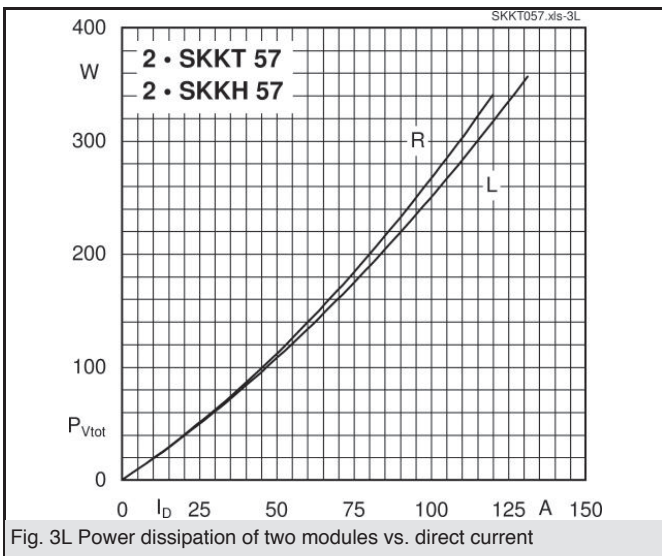
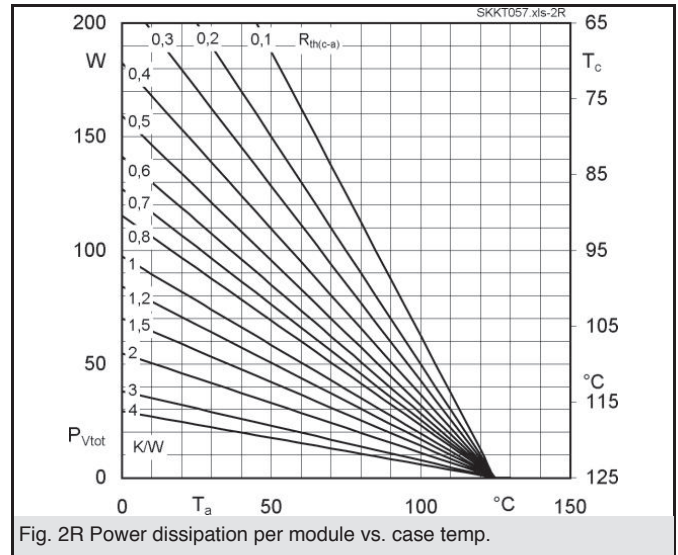
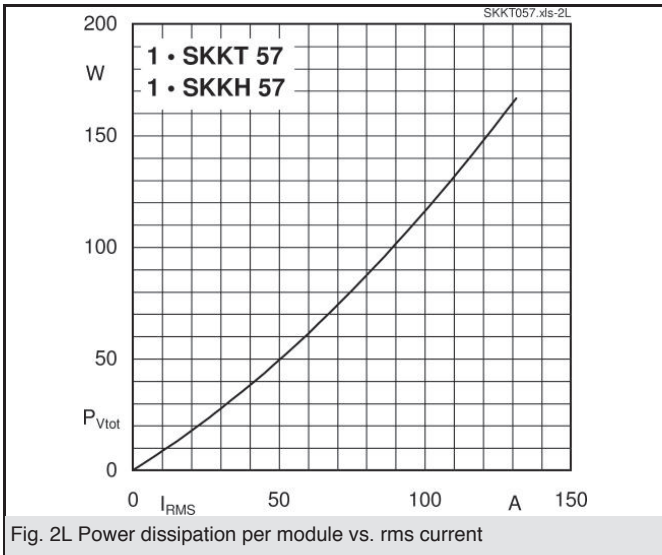
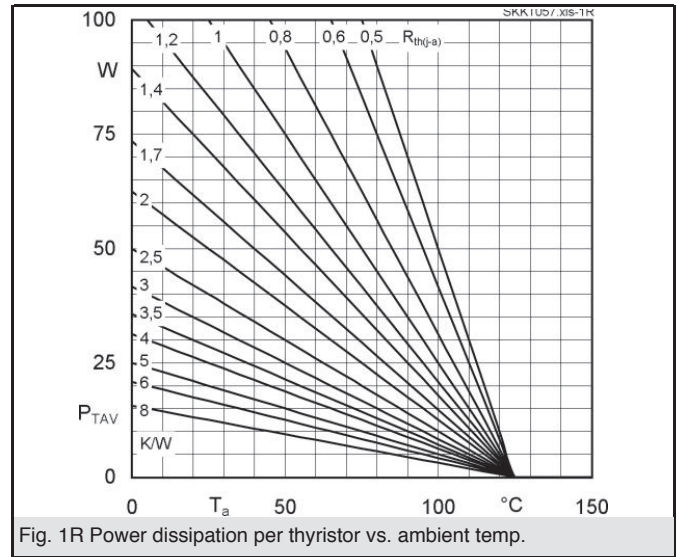
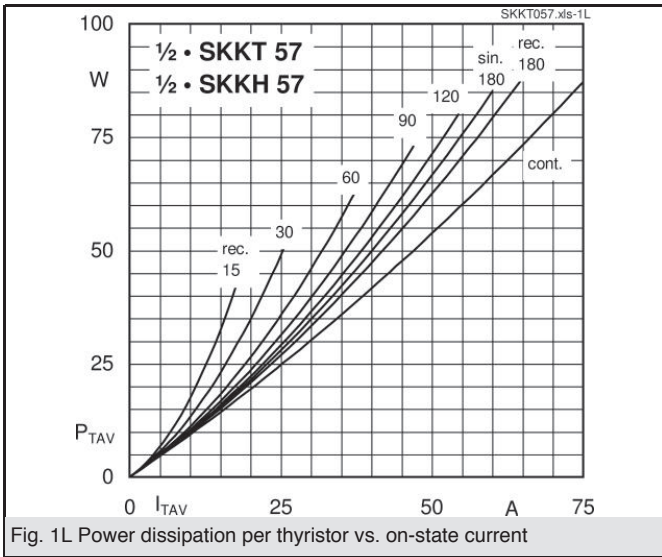


| Symbol | IRMS=95A (maximum value for continuous operation) ITAV=55A (sin.180; Tc=80°C) | | | | | | Units |
|-----------|--|------------|------------|------------|------------|------------|-------|
| | SKKT57/08E | SKKT57/12E | SKKT57/16E | SKKT57/18E | SKKH57/08E | SKKH57/18E | |
| VRRM,VDRM | 800 | 1200 | 1600 | 1800 | 800 | 1800 | V |
| VRSM | 900 | 1300 | 1700 | 1900 | 900 | 1900 | V |

Electrical characteristics

| Symbol | Conditions | Values | Units |
|-----------|----------------------------------|-------------|-------|
| ITAV | sin.180; Tc=85(100)°C; | 50(35) | A |
| ID | P3/180;Ta=45°C;B2/B6 | 57/68 | A |
| | P3/180F;Ta=35°C;B2/B6 | 100/130 | A |
| IRMS | P3/180F;Ta=35°C;W1/W3 | 130/3 x 100 | A |
| ITSM | Tvj=25°C; 10ms | 1500 | A |
| | Tvj=125°C; 10ms | 1250 | A |
| I²t | Tvj=25°C; 8.3...10ms | 11000 | A²s |
| | Tvj=125°C; 8.3...10ms | 8000 | A²s |
| VT | Tvj=25°C, IT=200A | max.1.65 | V |
| VT(TO) | Tvj=125°C | max.0.9 | V |
| rT | Tvj=125°C | max.3.5 | mΩ |
| IDD;IRD | Tvj=125°C, VRD=VRRM; VDD=VDRM | max.15 | mA |
| tgd | Tvj=25°C; Ig=1A; di/dt=1A/μs | 1 | μs |
| tgr | VD=0.67*VDRM | 2 | μs |
| (dv/dt)cr | Tvj=125°C | max.1000 | V/μs |
| (di/dt)cr | Tvj=125°C | max.150 | A/μs |
| tq | Tvj=125°C | 80 | μs |
| IH | Tvj=25°C;typ./max. | 150/250 | mA |
| IL | Tvj=25°C; RG=33Ω; typ./max. | 300/600 | mA |
| VGT | Tvj=25°C;d.c | min.3 | V |
| IGT | Tvj=25°C;d.c | min.150 | mA |
| VGD | Tvj=125°C;d.c | max.0.25 | V |
| IGD | Tvj=125°C;d.c | max.6 | mA |
| Rth(j-c) | cont.per thyristor/per module | 0.57/0.29 | K/W |
| Rth(j-c) | sin.180;per thyristor/per module | 0.6/0.3 | K/W |
| Rth(j-c) | rec.120;per thyristor/per module | 0.64/0.32 | K/W |
| Rth(j-s) | per thyristor/per module | 0.2/0.1 | K/W |
| Tvj | | -40...+125 | °C |
| Tstg | | -40...+125 | °C |
| Visol | a.c.50Hz; r.m.s; 1s/1min. | 3600/3000 | V~ |
| Ms | to heatsink | 5±15%¹) | Nm |
| Mt | to terminals | 3±15% | Nm |
| a | | 5*9.81 | m/s² |
| m | approx. | 95 | g |

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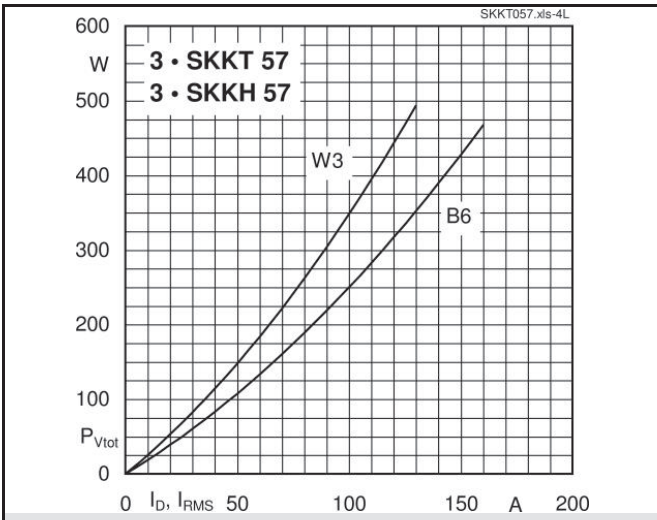


Fig. 4L Power dissipation of three modules vs. direct and rms current

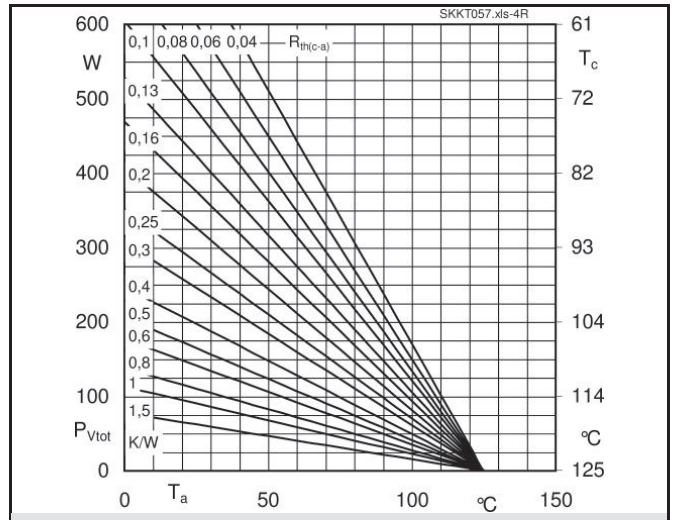


Fig. 4R Power dissipation of three modules vs. case temp.

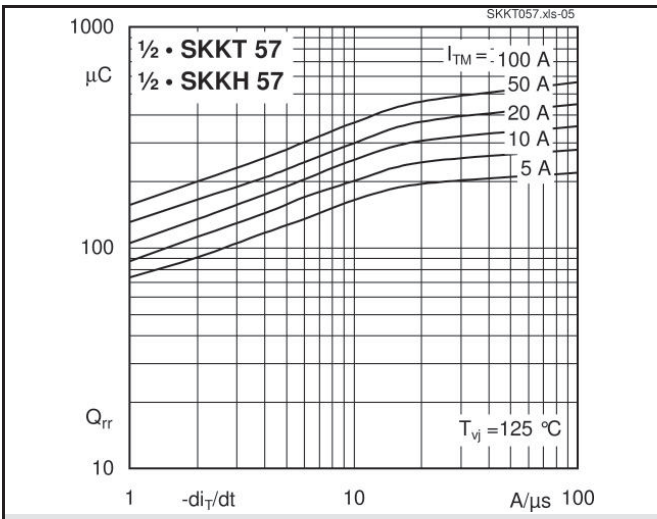


Fig. 5 Recovered charge vs. current decrease

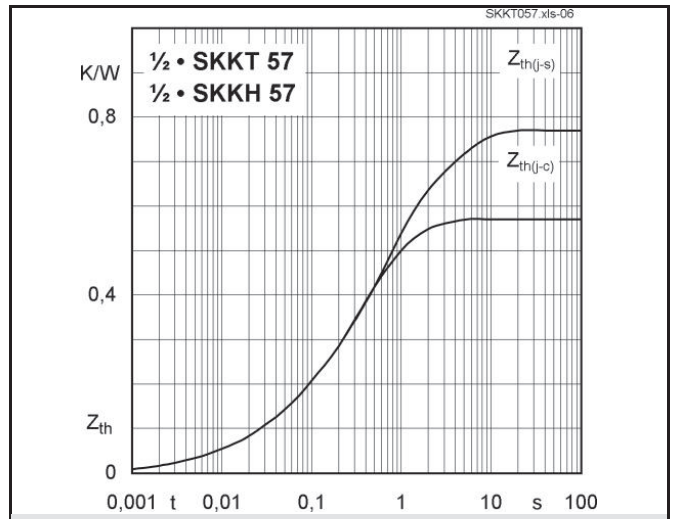


Fig. 6 Transient thermal impedance vs. time

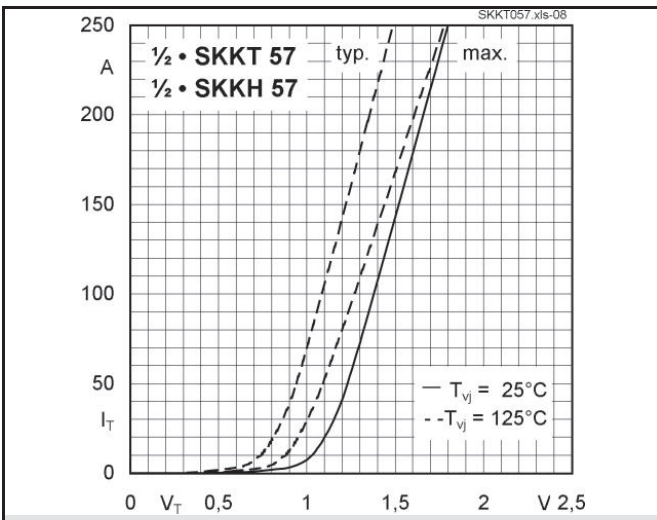


Fig. 7 On-state characteristics

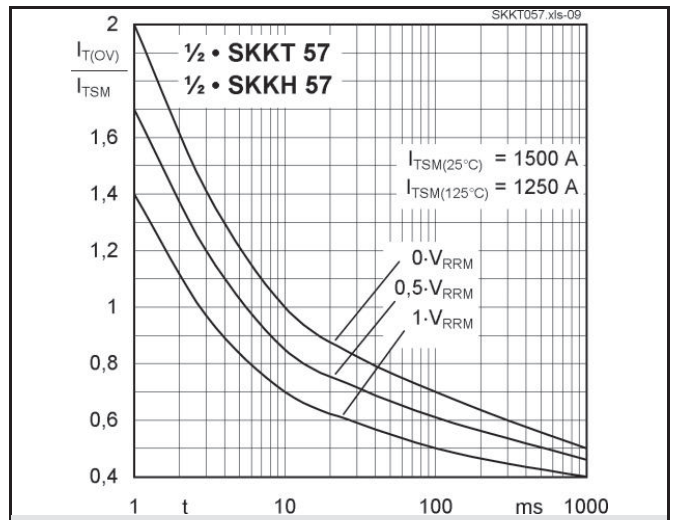


Fig. 8 Surge overload current vs. time

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