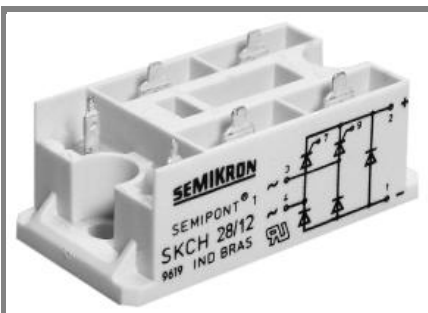


SKBH 28



SEMIPONT[®] 1

Controllable Bridge Rectifiers

SKBH 28

Features

- Sturdy isolated metal baseplate
- Fast-on terminals with solder tips
- Suitable for wave soldering
- High surge current rating
- UL recognized, file no. E 63 532

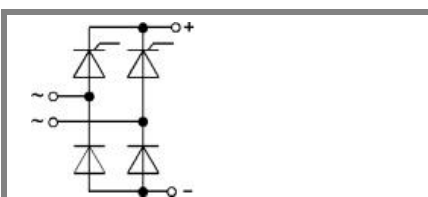
Typical Applications

- Controllable single phase rectifier
- DC power supplies
- DC motor controllers
- DC motor field controllers

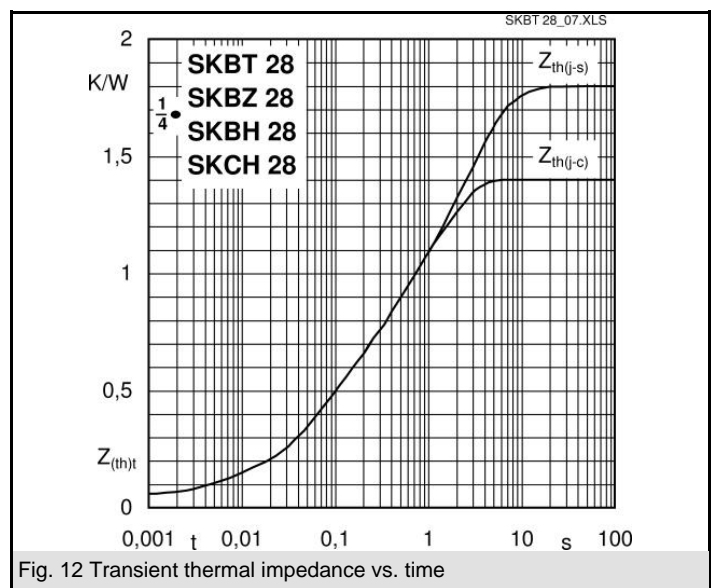
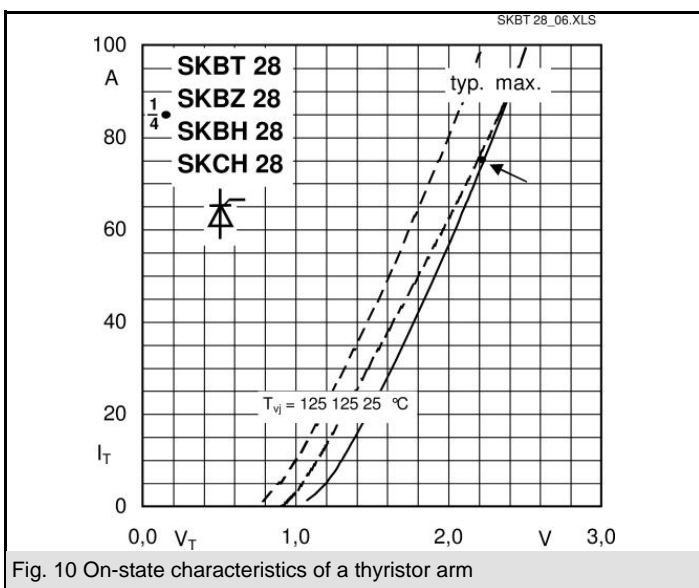
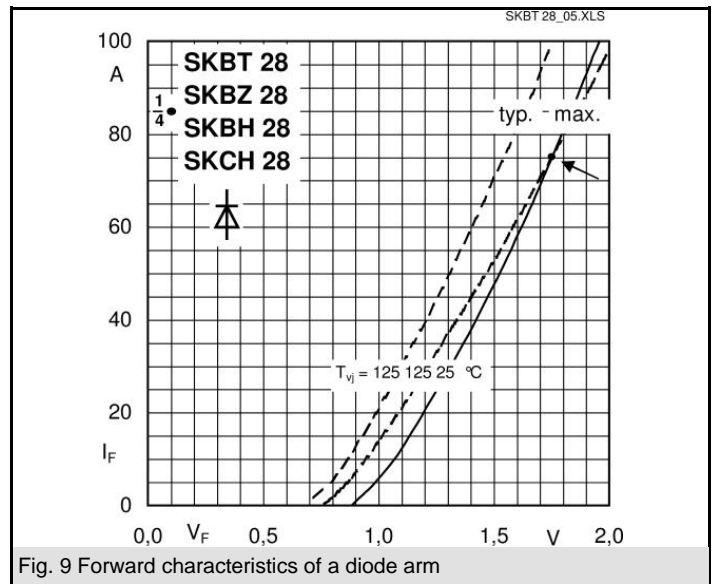
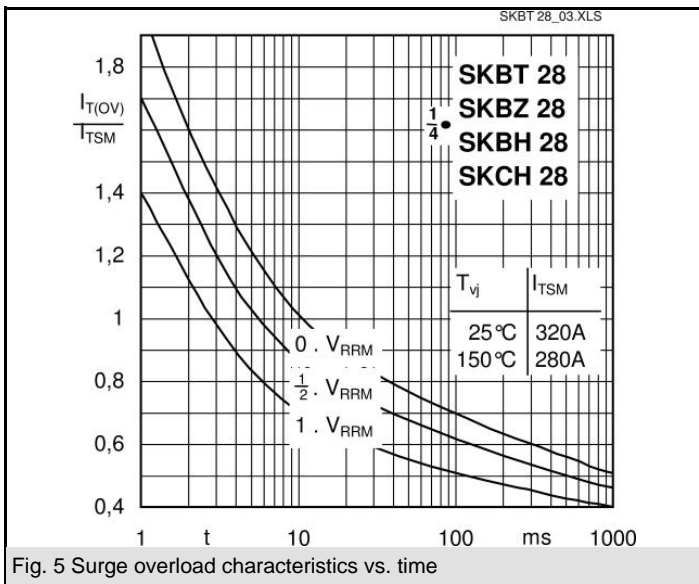
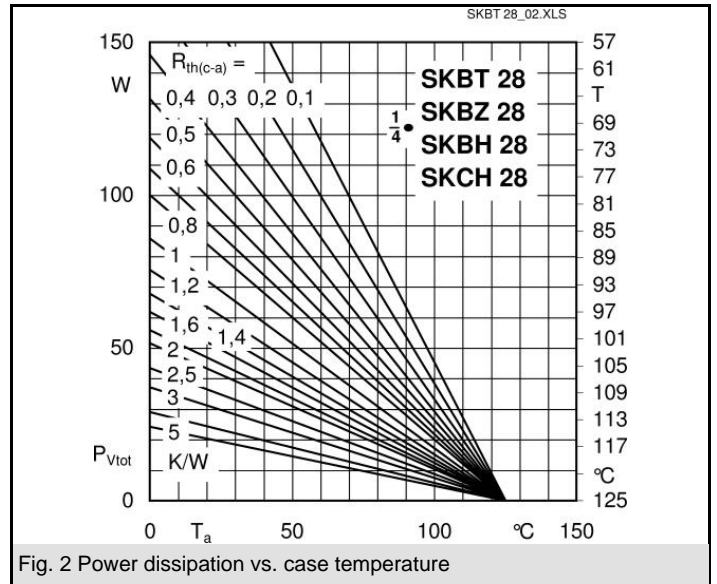
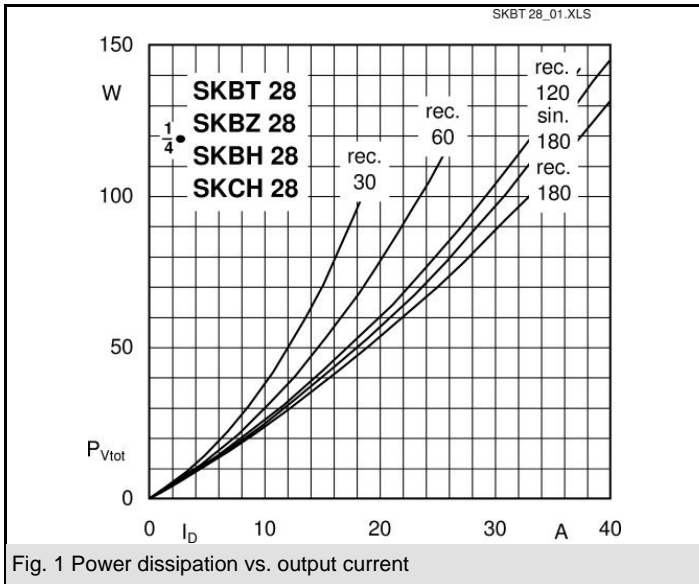
- 1) Painted metal shield of minimum 250 x 250 x 1 mm: $R_{th(c-a)} = 1,85 \text{ K/W}$
- 2) Freely suspended or mounted on insulator

| V_{RSM} V | V_{RRM}, V_{DRM} V | $I_D = 28 \text{ A (full conduction)}$ ($T_c = 89 \text{ °C}$) |
|----------------|-------------------------|---|
| 600 | 600 | SKBH 28/06 |
| 800 | 800 | SKBH 28/08 |
| 1200 | 1200 | SKBH 28/12 |
| 1400 | 1400 | SKBH 28/14 |

| Symbol | Conditions | Values | Units |
|--------------------|--|----------------|------------------|
| I_D | $T_c = 85 \text{ °C}$ | 30 | A |
| | $T_a = 45 \text{ °C; chassis } ^1)$ | 13 | A |
| | $T_a = 45 \text{ °C; P5A/100}$ | 15 | A |
| | $T_a = 45 \text{ °C; P13A/125}$ | 16 | A |
| | $T_a = 45 \text{ °C; P1A/120}$ | 23 | A |
| I_{TSM}, I_{FSM} | $T_{vj} = 25 \text{ °C; } 10 \text{ ms}$ | 320 | A |
| | $T_{vj} = 125 \text{ °C; } 10 \text{ ms}$ | 280 | A |
| i^2t | $T_{vj} = 25 \text{ °C; } 8,3 \dots 10 \text{ ms}$ | 510 | A ² s |
| | $T_{vj} = 125 \text{ °C; } 8,3 \dots 10 \text{ ms}$ | 390 | A ² s |
| V_T | $T_{vj} = 25 \text{ °C; } I_T = 75 \text{ A}$ | max. 2,25 | V |
| $V_{T(TO)}$ | $T_{vj} = 125 \text{ °C;}$ | 1 | V |
| r_T | $T_{vj} = 125 \text{ °C}$ | 16 | mΩ |
| I_{DD}, I_{RD} | $T_{vj} = 125 \text{ °C; } V_{DD} = V_{DRM}; V_{RD} = V_{RRM}$ | max. 8 | mA |
| t_{gd} | $T_{vj} = 25 \text{ °C; } I_G = 1 \text{ A; } di_G/dt = 1 \text{ A/}\mu\text{s}$ | 1 | μs |
| t_{gr} | $V_D = 0,67 \cdot V_{DRM}$ | 1 | μs |
| $(dv/dt)_{cr}$ | $T_{vj} = 125 \text{ °C}$ | max. 500 | V/μs |
| $(di/dt)_{cr}$ | $T_{vj} = 125 \text{ °C; } f = 50 \text{ Hz}$ | max. 50 | A/μs |
| t_q | $T_{vj} = 125 \text{ °C; typ.}$ | 80 | μs |
| I_H | $T_{vj} = 25 \text{ °C; typ. / max.}$ | 50 / 150 | mA |
| I_L | $T_{vj} = 25 \text{ °C; } R_G = 33 \text{ }\Omega$ | 100 / 300 | mA |
| V_{GT} | $T_{vj} = 25 \text{ °C; d.c.}$ | min. 2 | V |
| I_{GT} | $T_{vj} = 25 \text{ °C; d.c.}$ | min. 100 | mA |
| V_{GD} | $T_{vj} = 125 \text{ °C; d.c.}$ | max. 0,25 | V |
| I_{GD} | $T_{vj} = 125 \text{ °C; d.c.}$ | max. 3 | mA |
| $R_{th(j-c)}$ | per thyristor / diode | 1,8 | K/W |
| | total | 0,45 | K/W |
| | $R_{th(c-s)}$ total | 0,1 | K/W |
| | $R_{th(j-a)}$ total ²⁾ | 15 | 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 | case to heatsink | 2 | Nm |
| M_t | | n.a. | Nm |
| m | | 66 | g |
| Case | SKBH | G 23 | |



SKBH



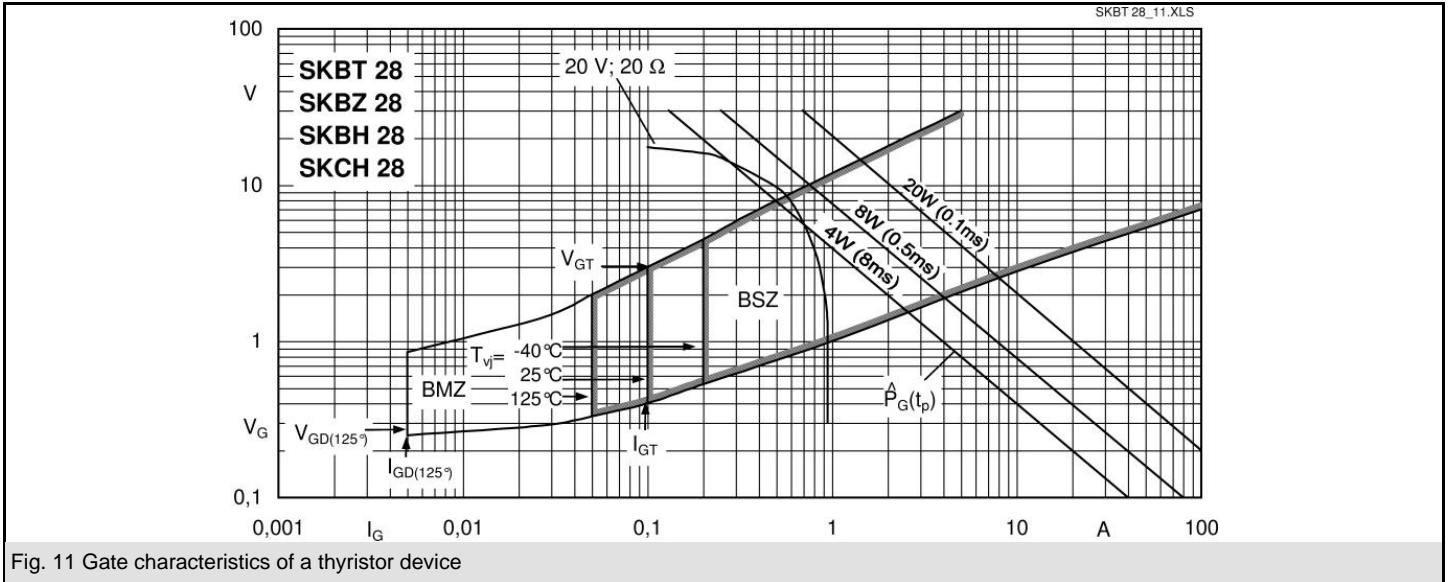
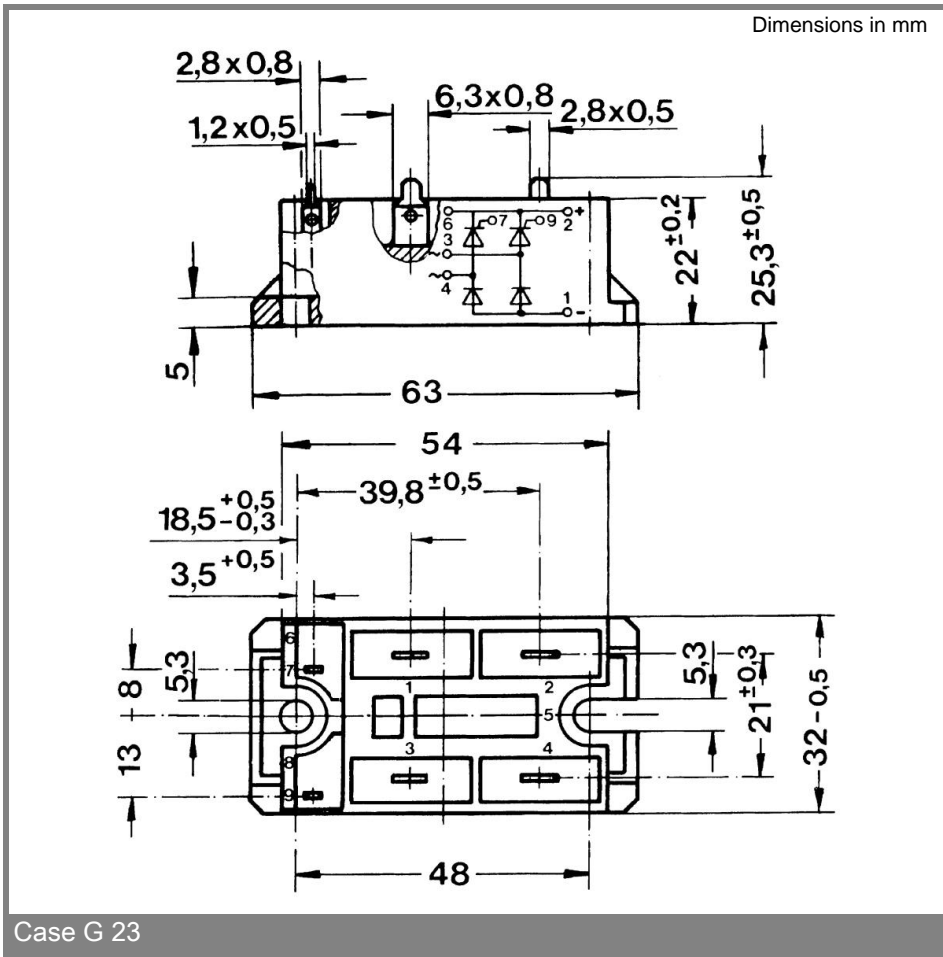


Fig. 11 Gate characteristics of a thyristor device



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