

SEMIPONT™ 5

Bridge Rectifier

SKDT 145

Target Data

Features

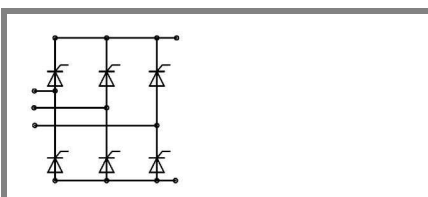
- Compact design
- Two screws mounting
- Heat transfer and isolation through direct copper board (low R_{th})
- Low resistance in steady-state and high reliability
- High surge currents
- Glass passivated thyristor chips
- Up to 1600 V reverse voltage
- UL -recognized, file no. E 63 532

Typical Applications*

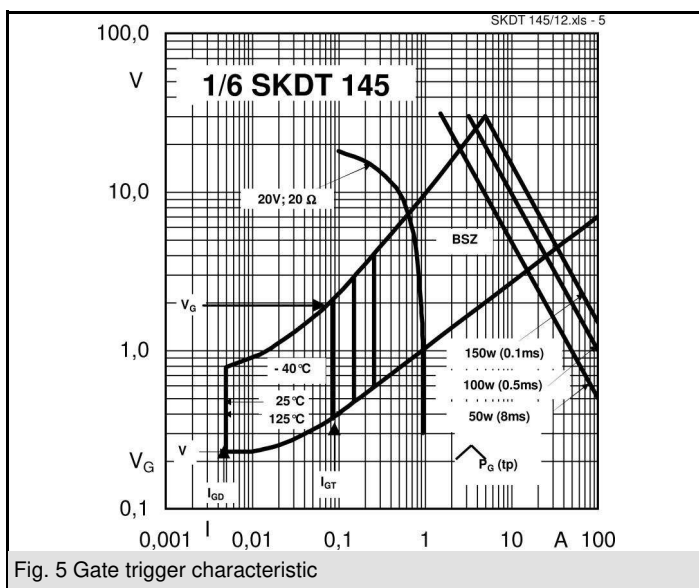
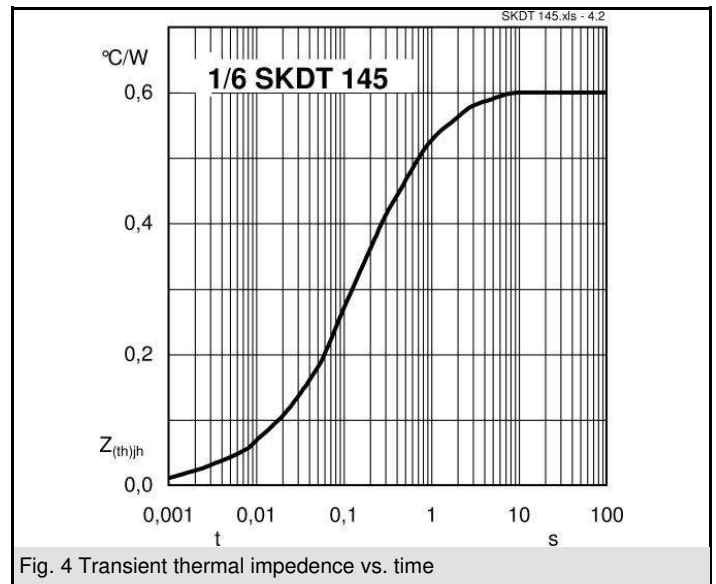
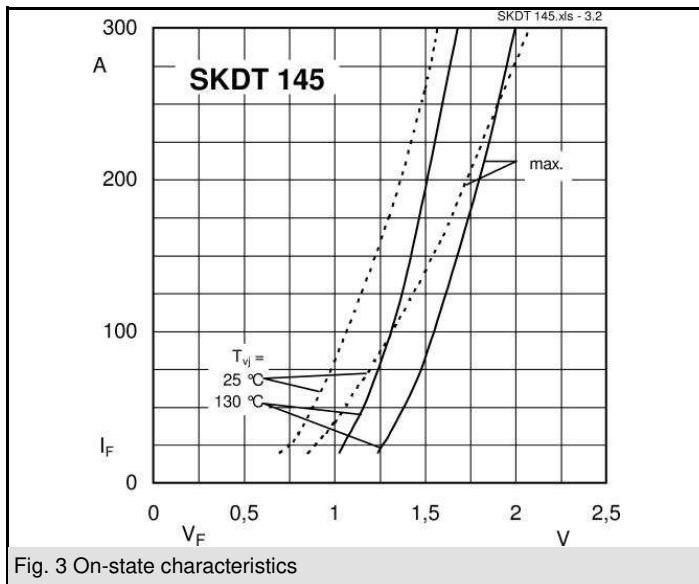
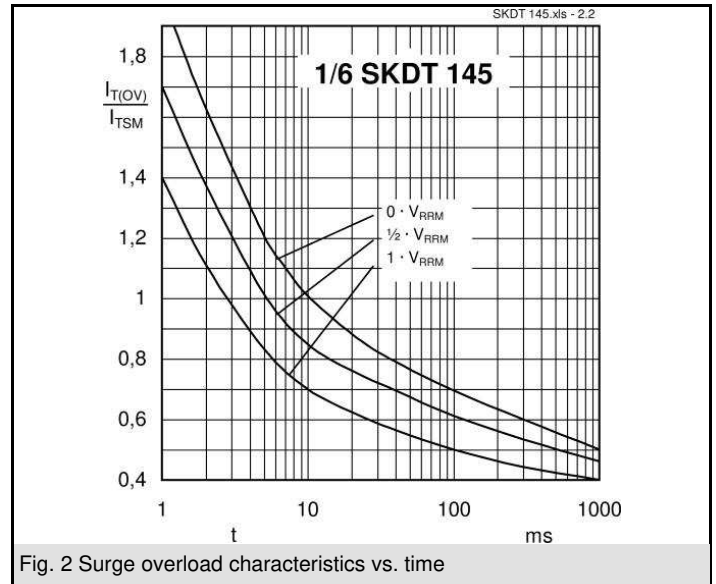
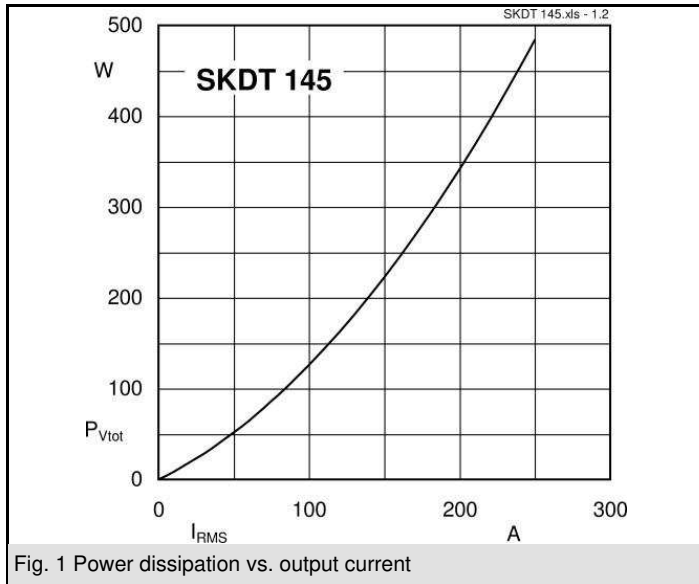
- DC and AC drives
- Controlled field rectifier for DC motors
- Controlled battery charger

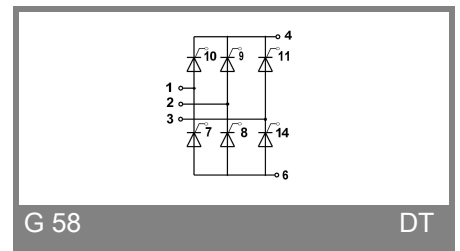
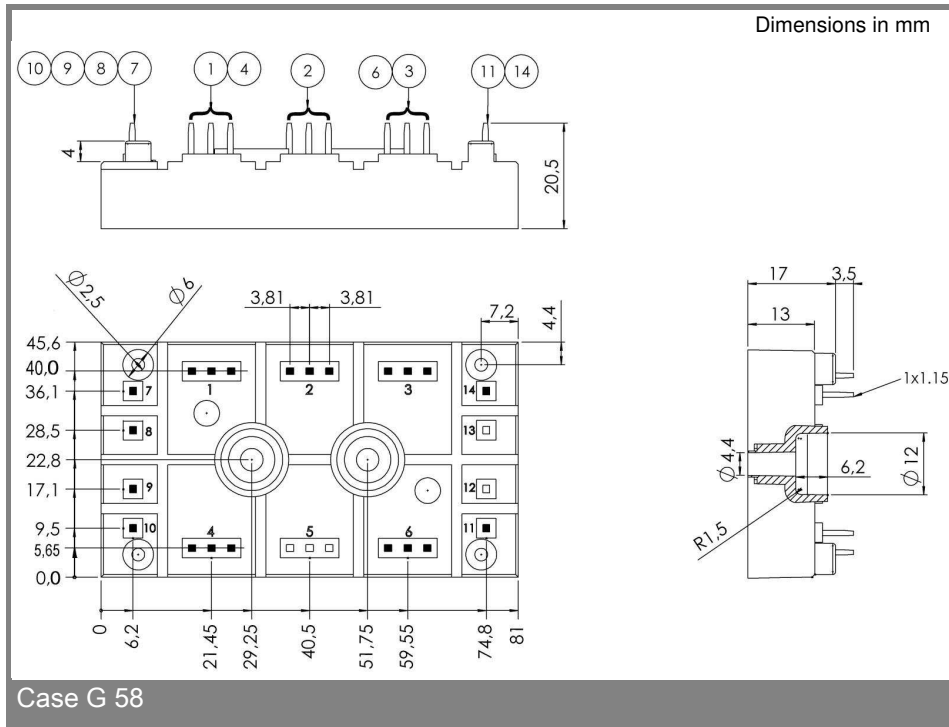
| V_{RSM} V | V_{RRM}, V_{DRM} V | $I_D = 140$ A (full conduction) ($T_s = 80$ °C) |
|----------------|-------------------------|---|
| 1300 | 1200 | SKDT 145/12 |
| 1700 | 1600 | SKDT 145/16 |

| Symbol | Conditions | Values | Units |
|------------------|---|----------------|--------------------------------------|
| I_D | $T_s = 80$ °C | 140 | A |
| I_{TSM} | $T_{vj} = 25$ °C; 10 ms $T_{vj} = 125$ °C; 10 ms | 1350 1250 | A A |
| i^2t | $T_{vj} = 25$ °C; 8,3 ... 10 ms $T_{vj} = 125$ °C; 8,3 ... 10 ms | 9000 7800 | A ² s A ² s |
| V_T | $T_{vj} = 25$ °C; $I_T = 150$ A | max. 1,6 | V |
| $V_{T(TO)}$ | $T_{vj} = 125$ °C; | max. 0,9 | V |
| r_T | $T_{vj} = 125$ °C | max. 5 | mΩ |
| $I_{DD}; I_{RD}$ | $T_{vj} = 125$ °C; $V_{DD} = V_{DRM}; V_{RD} = V_{RRM}$ | max. 20 | mA |
| t_{gd} | $T_{vj} =$ °C; $I_G =$ A; $di_G/dt =$ A/μs | | μs |
| t_{gr} | $V_D = \cdot V_{DRM}$ | | μs |
| $(dv/dt)_{cr}$ | $T_{vj} = 125$ °C | max. 500 | V/μs |
| $(di/dt)_{cr}$ | $T_{vj} = 125$ °C; $f = 50..60$ Hz | max. 50 | A/μs |
| t_q | $T_{vj} = 125$ °C; typ. | 150 | μs |
| I_H | $T_{vj} = 25$ °C; typ. / max. | - / 250 | mA |
| I_L | $T_{vj} = 25$ °C; $R_G = 33$ Ω | - / 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 |
| $R_{th(j-s)}$ | per thyristor | 0,6 | K/W K/W K/W |
| T_{vj} | | - 40 ... + 125 | °C |
| T_{stg} | | - 40 ... + 125 | °C |
| T_{solder} | terminals | 260 | °C |
| V_{isol} | a. c. 50 Hz; r.m.s.; 1 s / 1 min. | 3600 (3000) | V |
| M_s | to heatsink | 2,5 | Nm |
| M_t | | | Nm |
| m | approx. | 75 | g |
| Case | | G 58 | |



SKDT





* The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON products in life support appliances and systems is subject to prior specification and written approval by SEMIKRON. We therefore strongly recommend prior consultation of our personal.