

SEMIPONT™ 5

Bridge Rectifier

SKDT 145

Target Data

Features

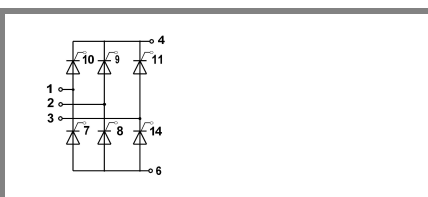
- Compact design
- Two screws mounting
- Heat transfer and isolation through direct copper board (low R_{th})
- Low resistance in steady-state and high reliability
- High surge currents
- Glass passivated thyristor chips
- Up to 1600 V reverse voltage
- UL -recognized, file no. E 63 532

Typical Applications

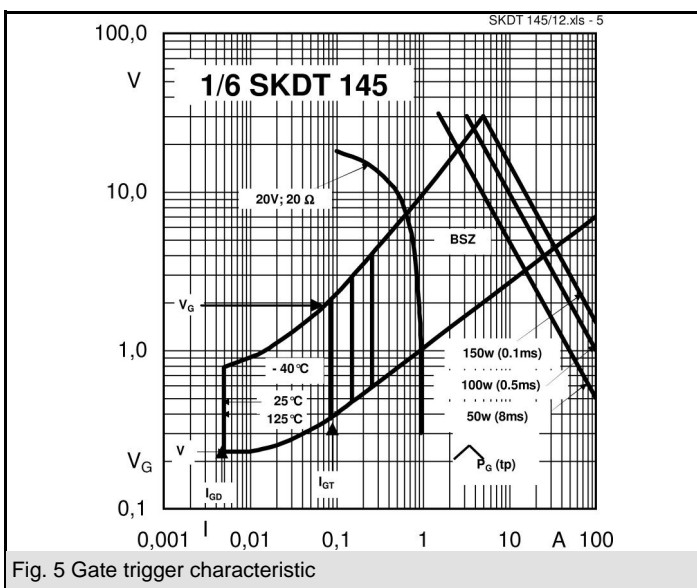
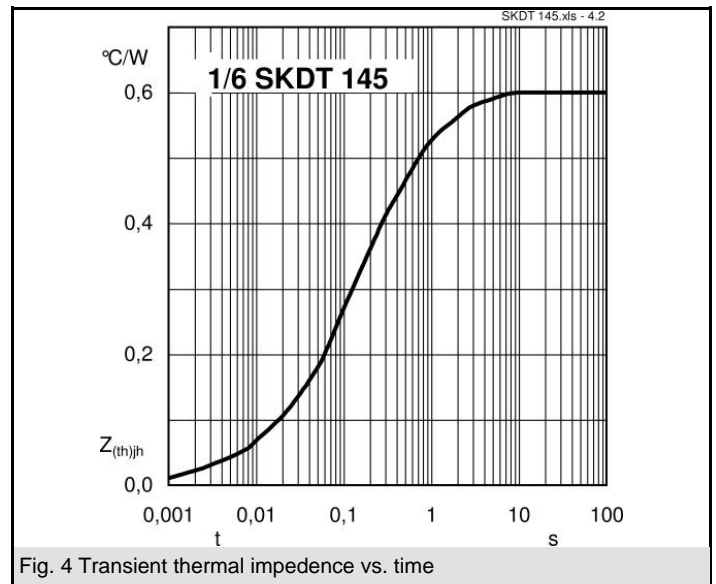
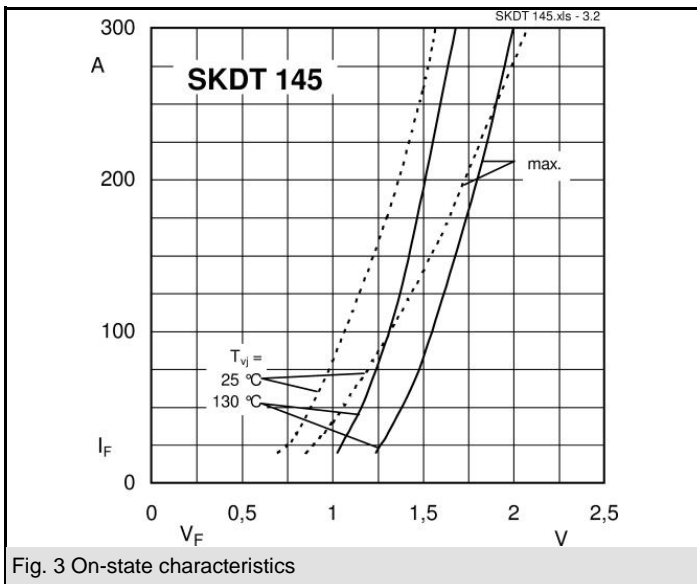
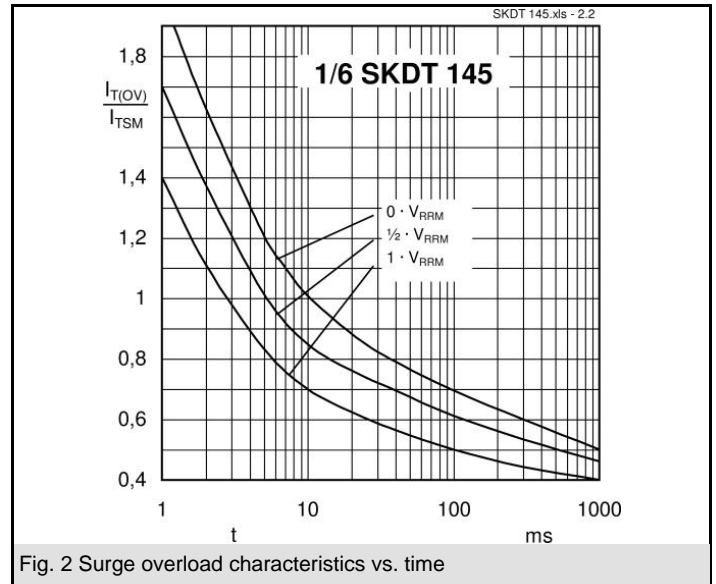
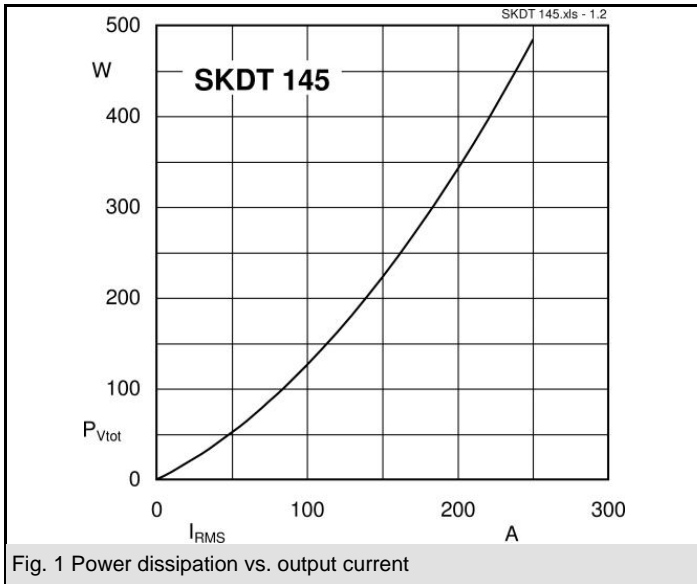
- DC and AC drives
- Controlled field rectifier for DC motors
- Controlled battery charger

| 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 |

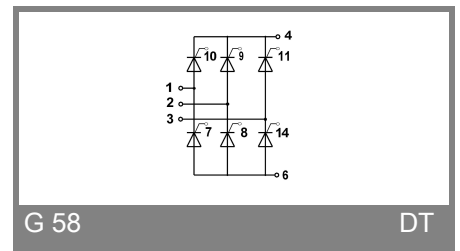
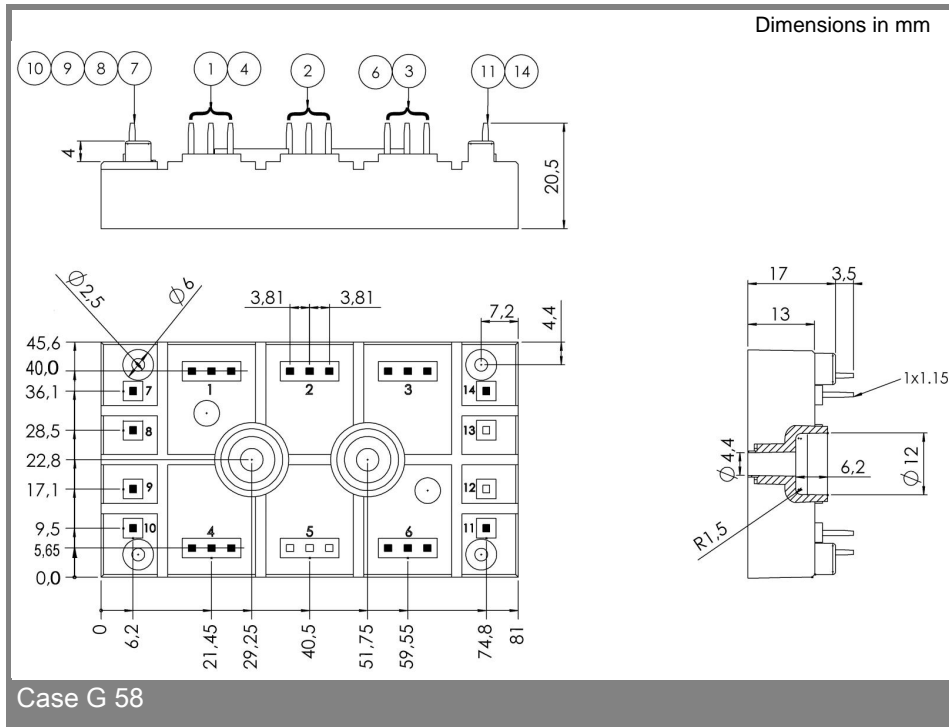
| Symbol | Conditions | Values | Units |
|------------------|---|----------------|--------------------------------------|
| I_D | $T_s = 80$ °C | 140 | A |
| I_{TSM} | $T_{vj} = 25$ °C; 10 ms $T_{vj} = 125$ °C; 10 ms | 1350 1250 | A A |
| i^2t | $T_{vj} = 25$ °C; 8,3 ... 10 ms $T_{vj} = 125$ °C; 8,3 ... 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} | $T_{vj} = 25$ °C; $I_G = 1$ A; $di_G/dt = 1$ A/μs | | μs |
| t_{gr} | $V_D = 1 \cdot V_{DRM}$ | | 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 | |



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