



**Vorläufige Daten
Preliminary Data**

Diode, Wechselrichter / Diode, Inverter

Höchstzulässige Werte / Maximum Rated Values

| | | | | |
|---|--|-----------|------|-----------------------|
| Periodische Spitzensperrspannung Repetitive peak reverse voltage | $T_{vj} = 25^{\circ}\text{C}$ | V_{RRM} | 1200 | V |
| Dauergleichstrom Continuous DC forward current | | I_F | 1800 | A |
| Periodischer Spitzenstrom Repetitive peak forward current | $t_P = 1\text{ ms}$ | I_{FRM} | 3600 | A |
| Grenzlastintegral I^2t - value | $V_R = 0\text{ V}, t_P = 10\text{ ms}, T_{vj} = 125^{\circ}\text{C}$ | I^2t | 420 | kA^2s |
| | $V_R = 0\text{ V}, t_P = 10\text{ ms}, T_{vj} = 150^{\circ}\text{C}$ | | 405 | kA^2s |

Charakteristische Werte / Characteristic Values

| | | | min. | typ. | max. | |
|---|---|--------------------------------|-----------|------|------|--------------------|
| Durchlassspannung Forward voltage | $I_F = 1800\text{ A}, V_{GE} = 0\text{ V}$ | $T_{vj} = 25^{\circ}\text{C}$ | | 1,80 | 2,35 | V |
| | $I_F = 1800\text{ A}, V_{GE} = 0\text{ V}$ | $T_{vj} = 125^{\circ}\text{C}$ | V_F | 1,75 | | V |
| | $I_F = 1800\text{ A}, V_{GE} = 0\text{ V}$ | $T_{vj} = 150^{\circ}\text{C}$ | | 1,70 | | V |
| Rückstromspitze Peak reverse recovery current | $I_F = 1800\text{ A}, -di_F/dt = 6300\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$ $V_R = 600\text{ V}$ $V_{GE} = -15\text{ V}$ | $T_{vj} = 25^{\circ}\text{C}$ | | 650 | | A |
| | | $T_{vj} = 125^{\circ}\text{C}$ | I_{RM} | 970 | | A |
| | | $T_{vj} = 150^{\circ}\text{C}$ | | 1050 | | A |
| Sperrverzögerungsladung Recovered charge | $I_F = 1800\text{ A}, -di_F/dt = 6300\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$ $V_R = 600\text{ V}$ $V_{GE} = -15\text{ V}$ | $T_{vj} = 25^{\circ}\text{C}$ | | 160 | | μC |
| | | $T_{vj} = 125^{\circ}\text{C}$ | Q_r | 345 | | μC |
| | | $T_{vj} = 150^{\circ}\text{C}$ | | 390 | | μC |
| Abschaltenergie pro Puls Reverse recovery energy | $I_F = 1800\text{ A}, -di_F/dt = 6300\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$ $V_R = 600\text{ V}$ $V_{GE} = -15\text{ V}$ | $T_{vj} = 25^{\circ}\text{C}$ | | 70,0 | | mJ |
| | | $T_{vj} = 125^{\circ}\text{C}$ | E_{rec} | 150 | | mJ |
| | | $T_{vj} = 150^{\circ}\text{C}$ | | 165 | | mJ |
| Wärmewiderstand, Chip bis Gehäuse Thermal resistance, junction to case | pro Diode / per diode | R_{thJC} | | | 23,5 | K/kW |
| Wärmewiderstand, Gehäuse bis Kühlkörper Thermal resistance, case to heatsink | pro Diode / per diode $\lambda_{Paste} = 1\text{ W}/(\text{m}\cdot\text{K}) / \lambda_{grease} = 1\text{ W}/(\text{m}\cdot\text{K})$ | R_{thCH} | | 9,50 | | K/kW |
| Temperatur im Schaltbetrieb Temperature under switching conditions | | $T_{vj\text{ op}}$ | -40 | | 150 | $^{\circ}\text{C}$ |

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Modul / Module

| | | | | | |
|--|--|----------------------|--------------------------------|------|---------|
| Isolations-Prüfspannung Isolation test voltage | RMS, f = 50 Hz, t = 1 min. | V _{ISOL} | 2,5 | | kV |
| Material Modulgrundplatte Material of module baseplate | | | Cu | | |
| Innere Isolation Internal isolation | Basisisolierung (Schutzklasse 1, EN61140) basic insulation (class 1, IEC 61140) | | Al ₂ O ₃ | | |
| Kriechstrecke Creepage distance | Kontakt - Kühlkörper / terminal to heatsink Kontakt - Kontakt / terminal to terminal | | 32,0 32,0 | | mm |
| Luftstrecke Clearance | Kontakt - Kühlkörper / terminal to heatsink Kontakt - Kontakt / terminal to terminal | | 19,0 19,0 | | mm |
| Vergleichszahl der Kriechwegbildung Comperative tracking index | | CTI | > 400 | | |
| | | | min. | typ. | max. |
| Modulstreuintduktivität Stray inductance module | | L _{sCE} | | 6,0 | nH |
| Modulleitungswiderstand, Anschlüsse - Chip Module lead resistance, terminals - chip | T _C = 25°C, pro Schalter / per switch | R _{CC'+EE'} | | 0,12 | mΩ |
| Lagertemperatur Storage temperature | | T _{stg} | -40 | | 150 °C |
| Anzugsdrehmoment f. Modulmontage Mounting torque for modul mounting | Schraube M6 - Montage gem. gültiger Applikationsschrift Screw M6 - Mounting according to valid application note | M | 4,25 | | 5,75 Nm |
| Anzugsdrehmoment f. elektr. Anschlüsse Terminal connection torque | Schraube M4 - Montage gem. gültiger Applikationsschrift Screw M4 - Mounting according to valid application note Schraube M8 - Montage gem. gültiger Applikationsschrift Screw M8 - Mounting according to valid application note | M | 1,7 | - | 2,1 Nm |
| | | | 8,0 | - | 10 Nm |
| Gewicht Weight | | G | | 1900 | g |

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