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|---|---|--------------------|-----|------|-----|-----|
| Wärmewiderstand, Gehäuse bis Kühlkörper Thermal resistance, case to heatsink | pro IGBT / per IGBT $\lambda_{\text{Paste}} = 1 \text{ W}/(\text{m}\cdot\text{K})$ / $\lambda_{\text{grease}} = 1 \text{ W}/(\text{m}\cdot\text{K})$ | R_{thCH} | | 0,75 | | K/W |
| Temperatur im Schaltbetrieb Temperature under switching conditions | | $T_{\text{vj op}}$ | -40 | | 150 | °C |

Diode, Wechselrichter / Diode, Inverter

Höchstzulässige Werte / Maximum Rated Values

| | | | | | | |
|---|---|------------------|--|------|--|------------------|
| Periodische Spitzensperrspannung Repetitive peak reverse voltage | $T_{\text{vj}} = 25^\circ\text{C}$ | V_{RRM} | | 650 | | V |
| Dauergleichstrom Continuous DC forward current | | I_{F} | | 25 | | A |
| Periodischer Spitzenstrom Repetitive peak forward current | $t_{\text{p}} = 1 \text{ ms}$ | I_{FRM} | | 50 | | A |
| Grenzlastintegral I^2t - value | $V_{\text{R}} = 0 \text{ V}$, $t_{\text{p}} = 10 \text{ ms}$, $T_{\text{vj}} = 125^\circ\text{C}$ | I^2t | | 50,0 | | A ² s |

Charakteristische Werte / Characteristic Values

| | | | | min. | typ. | max. | |
|---|---|--|--------------------|------|----------------------|------|---|
| Durchlassspannung Forward voltage | $I_{\text{F}} = 25 \text{ A}$, $V_{\text{GE}} = 0 \text{ V}$ $I_{\text{F}} = 25 \text{ A}$, $V_{\text{GE}} = 0 \text{ V}$ $I_{\text{F}} = 25 \text{ A}$, $V_{\text{GE}} = 0 \text{ V}$ | $T_{\text{vj}} = 25^\circ\text{C}$ $T_{\text{vj}} = 125^\circ\text{C}$ $T_{\text{vj}} = 150^\circ\text{C}$ | V_{F} | | 1,65 1,60 1,55 | 2,15 | V V V |
| Rückstromspitze Peak reverse recovery current | $I_{\text{F}} = 25 \text{ A}$, $-di_{\text{F}}/dt = 2300 \text{ A}/\mu\text{s}$ ($T_{\text{vj}}=150^\circ\text{C}$) $V_{\text{R}} = 300 \text{ V}$ $V_{\text{GE}} = -15 \text{ V}$ | $T_{\text{vj}} = 25^\circ\text{C}$ $T_{\text{vj}} = 125^\circ\text{C}$ $T_{\text{vj}} = 150^\circ\text{C}$ | I_{RM} | | 35,0 40,0 41,0 | | A A A |
| Sperrverzögerungsladung Recovered charge | $I_{\text{F}} = 25 \text{ A}$, $-di_{\text{F}}/dt = 2300 \text{ A}/\mu\text{s}$ ($T_{\text{vj}}=150^\circ\text{C}$) $V_{\text{R}} = 300 \text{ V}$ $V_{\text{GE}} = -15 \text{ V}$ | $T_{\text{vj}} = 25^\circ\text{C}$ $T_{\text{vj}} = 125^\circ\text{C}$ $T_{\text{vj}} = 150^\circ\text{C}$ | Q_{r} | | 0,96 1,60 1,75 | | μC μC μC |
| Abschaltenergie pro Puls Reverse recovery energy | $I_{\text{F}} = 25 \text{ A}$, $-di_{\text{F}}/dt = 2300 \text{ A}/\mu\text{s}$ ($T_{\text{vj}}=150^\circ\text{C}$) $V_{\text{R}} = 300 \text{ V}$ $V_{\text{GE}} = -15 \text{ V}$ | $T_{\text{vj}} = 25^\circ\text{C}$ $T_{\text{vj}} = 125^\circ\text{C}$ $T_{\text{vj}} = 150^\circ\text{C}$ | E_{rec} | | 0,21 0,35 0,39 | | mJ mJ mJ |
| Wärmewiderstand, Chip bis Gehäuse Thermal resistance, junction to case | pro Diode / per diode | | R_{thJC} | | 1,25 | 1,45 | K/W |
| Wärmewiderstand, Gehäuse bis Kühlkörper Thermal resistance, case to heatsink | pro Diode / per diode $\lambda_{\text{Paste}} = 1 \text{ W}/(\text{m}\cdot\text{K})$ / $\lambda_{\text{grease}} = 1 \text{ W}/(\text{m}\cdot\text{K})$ | | R_{thCH} | | 0,95 | | K/W |
| Temperatur im Schaltbetrieb Temperature under switching conditions | | | $T_{\text{vj op}}$ | -40 | | 150 | °C |

NTC-Widerstand / NTC-Thermistor

Charakteristische Werte / Characteristic Values

| | | | | min. | typ. | max. | |
|--|--|--|--------------|------|------|------|------------|
| Nennwiderstand Rated resistance | $T_{\text{C}} = 25^\circ\text{C}$ | | R_{25} | | 5,00 | | k Ω |
| Abweichung von R100 Deviation of R100 | $T_{\text{C}} = 100^\circ\text{C}$, $R_{100} = 493 \Omega$ | | $\Delta R/R$ | -5 | | 5 | % |
| Verlustleistung Power dissipation | $T_{\text{C}} = 25^\circ\text{C}$ | | P_{25} | | | 20,0 | mW |
| B-Wert B-value | $R_2 = R_{25} \exp [B_{25/50}(1/T_2 - 1/(298,15 \text{ K}))]$ | | $B_{25/50}$ | | 3375 | | K |
| B-Wert B-value | $R_2 = R_{25} \exp [B_{25/80}(1/T_2 - 1/(298,15 \text{ K}))]$ | | $B_{25/80}$ | | 3411 | | K |
| B-Wert B-value | $R_2 = R_{25} \exp [B_{25/100}(1/T_2 - 1/(298,15 \text{ K}))]$ | | $B_{25/100}$ | | 3433 | | K |

Angaben gemäß gültiger Application Note.
Specification according to the valid application note.

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Modul / Module

| | | | | | | |
|---|---|---------------------|--------------------------------------|------|------|----|
| Isolations-Prüfspannung Isolation test voltage | RMS, f = 50 Hz, t = 1 min. | V _{ISOL} | 2,5 | | | kV |
| Innere Isolation Internal isolation | Basisisolierung (Schutzklasse 1, EN61140) basic insulation (class 1, IEC 61140) | | impr. Al ₂ O ₃ | | | |
| Kriechstrecke Creepage distance | Kontakt - Kühlkörper / terminal to heatsink Kontakt - Kontakt / terminal to terminal | | 11,5 6,3 | | | mm |
| Luftstrecke Clearance | Kontakt - Kühlkörper / terminal to heatsink Kontakt - Kontakt / terminal to terminal | | 10,0 5,0 | | | mm |
| Vergleichszahl der Kriechwegbildung Comperative tracking index | | CTI | > 200 | | | |
| | | | min. | typ. | max. | |
| Modulstreuintuktivität Stray inductance module | | L _{sCE} | | 15 | | nH |
| Modulleitungswiderstand, Anschlüsse - Chip Module lead resistance, terminals - chip | T _c = 25°C, pro Schalter / per switch | R _{CC+EE'} | | 5,50 | | mΩ |
| Lagertemperatur Storage temperature | | T _{stg} | -40 | | 125 | °C |
| Anpresskraft für mech. Bef. pro Feder mounting force per clamp | | F | 20 | - | 50 | N |
| Gewicht Weight | | G | | 24 | | g |

Der Strom im Dauerbetrieb ist auf 25 A effektiv pro Anschlusspin begrenzt.
The current under continuous operation is limited to 25 A rms per connector pin.
VGE muss im Kurzschluss auf 15V begrenzt werden (z.B. Klemmschaltung).
VGE has to be limited to 15V during shortcircuit (e.g. clamping).

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