



Diode, Wechselrichter / Diode, Inverter

Höchstzulässige Werte / Maximum Rated Values

| | | | | |
|---|--|-----------|------------|--|
| Periodische Spitzensperrspannung Repetitive peak reverse voltage | $T_{vj} = 25^{\circ}\text{C}$ | V_{RRM} | 1700 | V |
| Dauergleichstrom Continuous DC forward current | | I_F | 650 | A |
| Periodischer Spitzenstrom Repetitive peak forward current | $t_P = 1\text{ ms}$ | I_{FRM} | 1300 | A |
| Grenzlastintegral I^2t - value | $V_R = 0\text{ V}, t_P = 10\text{ ms}, T_{vj} = 125^{\circ}\text{C}$ $V_R = 0\text{ V}, t_P = 10\text{ ms}, T_{vj} = 150^{\circ}\text{C}$ | I^2t | 105 100 | kA ² s kA ² s |

Charakteristische Werte / Characteristic Values

| | | | min. | typ. | max. | |
|--|---|--------------------------------|------|------|------|--------------------|
| Durchlassspannung Forward voltage | $I_F = 650\text{ A}, V_{GE} = 0\text{ V}$ | $T_{vj} = 25^{\circ}\text{C}$ | | 1,70 | 2,15 | V |
| | $I_F = 650\text{ A}, V_{GE} = 0\text{ V}$ | $T_{vj} = 125^{\circ}\text{C}$ | | 1,70 | 2,15 | V |
| | $I_F = 650\text{ A}, V_{GE} = 0\text{ V}$ | $T_{vj} = 150^{\circ}\text{C}$ | | 1,70 | 2,15 | V |
| Rückstromspitze Peak reverse recovery current | $I_F = 650\text{ A}, -di_F/dt = 5800\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$ | $T_{vj} = 25^{\circ}\text{C}$ | | 775 | | A |
| | $V_R = 900\text{ V}$ | $T_{vj} = 125^{\circ}\text{C}$ | | 860 | | A |
| | $V_{GE} = -15\text{ V}$ | $T_{vj} = 150^{\circ}\text{C}$ | | 890 | | A |
| Sperrverzögerungsladung Recovered charge | $I_F = 650\text{ A}, -di_F/dt = 5800\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$ | $T_{vj} = 25^{\circ}\text{C}$ | | 175 | | μC |
| | $V_R = 900\text{ V}$ | $T_{vj} = 125^{\circ}\text{C}$ | | 300 | | μC |
| | $V_{GE} = -15\text{ V}$ | $T_{vj} = 150^{\circ}\text{C}$ | | 335 | | μC |
| Abschaltenergie pro Puls Reverse recovery energy | $I_F = 650\text{ A}, -di_F/dt = 5800\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$ | $T_{vj} = 25^{\circ}\text{C}$ | | 86,0 | | mJ |
| | $V_R = 900\text{ V}$ | $T_{vj} = 125^{\circ}\text{C}$ | | 155 | | mJ |
| | $V_{GE} = -15\text{ V}$ | $T_{vj} = 150^{\circ}\text{C}$ | | 180 | | mJ |
| Wärmewiderstand, Chip bis Kühlkörper Thermal resistance, junction to heatsink | pro Diode / per diode valid with IFX pre-applied thermal interface material | R_{thJH} | | | 87,4 | K/kW |
| Temperatur im Schaltbetrieb Temperature under switching conditions | | $T_{vj\text{ op}}$ | -40 | | 150 | $^{\circ}\text{C}$ |

NTC-Widerstand / NTC-Thermistor

Charakteristische Werte / Characteristic Values

| | | | min. | typ. | max. | |
|--|---|--------------|------|------|------|------------|
| Nennwiderstand Rated resistance | $T_{NTC} = 25^{\circ}\text{C}$ | R_{25} | | 5,00 | | k Ω |
| Abweichung von R100 Deviation of R100 | $T_{NTC} = 100^{\circ}\text{C}, R_{100} = 493\ \Omega$ | $\Delta R/R$ | -5 | | 5 | % |
| Verlustleistung Power dissipation | $T_{NTC} = 25^{\circ}\text{C}$ | 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.

| | |
|-----------------|---------------------------------|
| prepared by: SM | date of publication: 2016-09-06 |
| approved by: RN | revision: V3.0 |



Modul / Module

| | | | | | |
|--|--|----------------------|--------------------------------|--------|--------------|
| Isolations-Prüfspannung Isolation test voltage | RMS, f = 50 Hz, t = 1 min. | V _{ISOL} | 4,0 | | 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 | | 33,0 33,0 | | 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. |
| Modulstreuintuktivität Stray inductance module | | L _{sCE} | | 18 | nH |
| Modulleitungswiderstand, Anschlüsse - Chip Module lead resistance, terminals - chip | T _H = 25°C, pro Schalter / per switch | R _{CC'+EE'} | | 0,30 | mΩ |
| Lagertemperatur Storage temperature | | T _{stg} | -40 | | 125 °C |
| Höchstzulässige Bodenplattenbetriebstemperatur Maximum baseplate operation temperature | | T _{BPmax} | | | 125 °C |
| Anzugsdrehmoment f. Modulmontage Mounting torque for modul mounting | Schraube M5 - Montage gem. gültiger Applikationsschrift Screw M5 - Mounting according to valid application note | M | 3,00 | | 6,00 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 | 1,8 8,0 | - - | 2,1 10 Nm |
| Gewicht Weight | | G | | 825 | g |

Lagerung und Transport von Modulen mit TIM: siehe AN2012-07
Storage and shipment of modules with TIM: see AN2012-07

| | |
|-----------------|---------------------------------|
| prepared by: SM | date of publication: 2016-09-06 |
| approved by: RN | revision: V3.0 |