

初步数据
Preliminary Data

二极管, 逆变器 / Diode, Inverter
最大额定值 / Maximum Rated Values

| | | | | |
|---|--|-----------|-----|----------------------|
| 反向重复峰值电压 Repetitive peak reverse voltage | $T_{vj} = 25^{\circ}\text{C}$ | V_{RRM} | 650 | V |
| 连续正向直流电流 Continuous DC forward current | | I_F | 50 | A |
| 正向重复峰值电流 Repetitive peak forward current | $t_P = 1\text{ ms}$ | I_{FRM} | 100 | A |
| I_{2t} -值 I_{2t} - value | $V_R = 0\text{ V}, t_P = 10\text{ ms}, T_{vj} = 125^{\circ}\text{C}$ | I_{2t} | 330 | A^2s |
| | $V_R = 0\text{ V}, t_P = 10\text{ ms}, T_{vj} = 150^{\circ}\text{C}$ | | 300 | A^2s |

特征值 / Characteristic Values

| | | | min. | typ. | max. | |
|--|---|--------------------------------|------|------|------|--------------------|
| 正向电压 Forward voltage | $I_F = 50\text{ A}, V_{GE} = 0\text{ V}$ | $T_{vj} = 25^{\circ}\text{C}$ | | 1,55 | 1,95 | V |
| | $I_F = 50\text{ A}, V_{GE} = 0\text{ V}$ | $T_{vj} = 125^{\circ}\text{C}$ | | 1,50 | | V |
| | $I_F = 50\text{ A}, V_{GE} = 0\text{ V}$ | $T_{vj} = 150^{\circ}\text{C}$ | | 1,45 | | V |
| 反向恢复峰值电流 Peak reverse recovery current | $I_F = 50\text{ A}, -di_F/dt = 2800\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$ $V_R = 300\text{ V}$ $V_{GE} = -15\text{ V}$ | $T_{vj} = 25^{\circ}\text{C}$ | | 69,0 | | A |
| | | $T_{vj} = 125^{\circ}\text{C}$ | | 76,0 | | A |
| | | $T_{vj} = 150^{\circ}\text{C}$ | | 80,0 | | A |
| 恢复电荷 Recovered charge | $I_F = 50\text{ A}, -di_F/dt = 2800\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$ $V_R = 300\text{ V}$ $V_{GE} = -15\text{ V}$ | $T_{vj} = 25^{\circ}\text{C}$ | | 1,90 | | μC |
| | | $T_{vj} = 125^{\circ}\text{C}$ | | 3,40 | | μC |
| | | $T_{vj} = 150^{\circ}\text{C}$ | | 3,95 | | μC |
| 反向恢复损耗 (每脉冲) Reverse recovery energy | $I_F = 50\text{ A}, -di_F/dt = 2800\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$ $V_R = 300\text{ V}$ $V_{GE} = -15\text{ V}$ | $T_{vj} = 25^{\circ}\text{C}$ | | 0,60 | | mJ |
| | | $T_{vj} = 125^{\circ}\text{C}$ | | 0,95 | | mJ |
| | | $T_{vj} = 150^{\circ}\text{C}$ | | 1,10 | | mJ |
| 结 - 外壳热阻 Thermal resistance, junction to case | 每个二极管 / per diode | R_{thJC} | | | 1,20 | K/W |
| 外壳 - 散热器热阻 Thermal resistance, case to heatsink | 每个二极管 / 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} | | 0,30 | | K/W |
| 在开关状态下温度 Temperature under switching conditions | | $T_{vj\text{ op}}$ | -40 | | 150 | $^{\circ}\text{C}$ |

负温度系数热敏电阻 / NTC-Thermistor

特征值 / Characteristic Values

| | | | min. | typ. | max. | |
|------------------------------|---|--------------|------|------|------|------------------|
| 额定电阻值 Rated resistance | $T_C = 25^{\circ}\text{C}$ | R_{25} | | 5,00 | | $\text{k}\Omega$ |
| R100 偏差 Deviation of R100 | $T_C = 100^{\circ}\text{C}, R_{100} = 493\ \Omega$ | $\Delta R/R$ | -5 | | 5 | % |
| 耗散功率 Power dissipation | $T_C = 25^{\circ}\text{C}$ | P_{25} | | | 20,0 | mW |
| B-值 B-value | $R_2 = R_{25} \exp [B_{25/50}(1/T_2 - 1/(298,15\text{ K}))]$ | $B_{25/50}$ | | 3375 | | K |
| B-值 B-value | $R_2 = R_{25} \exp [B_{25/80}(1/T_2 - 1/(298,15\text{ K}))]$ | $B_{25/80}$ | | 3411 | | K |
| B-值 B-value | $R_2 = R_{25} \exp [B_{25/100}(1/T_2 - 1/(298,15\text{ K}))]$ | $B_{25/100}$ | | 3433 | | K |

根据应用手册标定

Specification according to the valid application note.

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| prepared by: AS | date of publication: 2013-11-08 |
| approved by: RS | revision: 2.0 |

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模块 / Module

| | | | | | |
|--|---|---------------------|--------------------------------|------|---------|
| 绝缘测试电压 Isolation test voltage | RMS, f = 50 Hz, t = 1 min. | V _{ISOL} | 2,5 | | kV |
| 模块基板材料 Material of module baseplate | | | Cu | | |
| 内部绝缘 Internal isolation | 基本绝缘 (class 1, IEC 61140) basic insulation (class 1, IEC 61140) | | Al ₂ O ₃ | | |
| 爬电距离 Creepage distance | 端子- 散热片 / terminal to heatsink 端子- 端子 / terminal to terminal | | 10,0 | | mm |
| 电气间隙 Clearance | 端子- 散热片 / terminal to heatsink 端子- 端子 / terminal to terminal | | 7,5 | | mm |
| 相对电痕指数 Comperative tracking index | | CTI | > 200 | | |
| | | | min. | typ. | max. |
| 外壳 - 散热器热阻 Thermal resistance, case to heatsink | 每个模块 / per module $\lambda_{\text{Paste}} = 1 \text{ W/(m}\cdot\text{K)} / \lambda_{\text{grease}} = 1 \text{ W/(m}\cdot\text{K)}$ | R _{thCH} | 0,02 | | K/W |
| 杂散电感,模块 Stray inductance module | | L _{sCE} | 19 | | nH |
| 模块引线电阻,端子-芯片 Module lead resistance, terminals - chip | T _C = 25°C, 每个开关 / per switch | R _{CC+EE'} | 2,50 | | mΩ |
| 储存温度 Storage temperature | | T _{stg} | -40 | 125 | °C |
| 模块安装的安装扭矩 Mounting torque for modul mounting | 螺丝 M5 根据相应的应用手册进行安装 Screw M5 - Mounting according to valid application note | M | 3,00 | - | 6,00 Nm |
| 重量 Weight | | G | 180 | | g |

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