



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<br>Repetitive peak reverse voltage | $T_{vj} = 25^{\circ}\text{C}$  | $V_{RRM}$ | 1700 | V                     |
| 连续正向直流电流<br>Continuous DC forward current   |  | $I_F$     | 800  | A                     |
| 正向重复峰值电流<br>Repetitive peak forward current | $t_P = 1\text{ ms}$  | $I_{FRM}$ | 1600 | A                     |
| $I^2t$ -值<br>$I^2t$ - value                 | $V_R = 0\text{ V}, t_P = 10\text{ ms}, T_{vj} = 125^{\circ}\text{C}$ | $I^2t$    | 125  | $\text{kA}^2\text{s}$ |

特征值 / Characteristic Values

|   |   |   | min.       | typ.         | max. |                                |
|---|---|---|------------|--------------|------|--------------------------------|
| 正向电压<br>Forward voltage                           | $I_F = 800\text{ A}, V_{GE} = 0\text{ V}$<br>$I_F = 800\text{ A}, V_{GE} = 0\text{ V}$  | $T_{vj} = 25^{\circ}\text{C}$<br>$T_{vj} = 125^{\circ}\text{C}$ | $V_F$      | 1,80<br>1,90 | 2,20 | V<br>V                         |
| 反向恢复峰值电流<br>Peak reverse recovery current         | $I_F = 800\text{ A}, -di_F/dt = 4900\text{ A}/\mu\text{s} (T_{vj}=125^{\circ}\text{C})$<br>$V_R = 900\text{ V}$<br>$V_{GE} = -15\text{ V}$        | $T_{vj} = 25^{\circ}\text{C}$<br>$T_{vj} = 125^{\circ}\text{C}$ | $I_{RM}$   | 780<br>850   |      | A<br>A                         |
| 恢复电荷<br>Recovered charge                          | $I_F = 800\text{ A}, -di_F/dt = 4900\text{ A}/\mu\text{s} (T_{vj}=125^{\circ}\text{C})$<br>$V_R = 900\text{ V}$<br>$V_{GE} = -15\text{ V}$        | $T_{vj} = 25^{\circ}\text{C}$<br>$T_{vj} = 125^{\circ}\text{C}$ | $Q_r$      | 205<br>345   |      | $\mu\text{C}$<br>$\mu\text{C}$ |
| 反向恢复损耗 (每脉冲)<br>Reverse recovery energy           | $I_F = 800\text{ A}, -di_F/dt = 4900\text{ A}/\mu\text{s} (T_{vj}=125^{\circ}\text{C})$<br>$V_R = 900\text{ V}$<br>$V_{GE} = -15\text{ V}$        | $T_{vj} = 25^{\circ}\text{C}$<br>$T_{vj} = 125^{\circ}\text{C}$ | $E_{rec}$  | 130<br>225   |      | mJ<br>mJ                       |
| 结 - 壳热阻<br>Thermal resistance, junction to case   | 每个二极管 / per diode   |   | $R_{thJC}$ |              | 43,0 | K/kW                           |
| 壳 - 散热器热阻<br>Thermal resistance, case to heatsink | 每个二极管 / per diode<br>$\lambda_{\text{Paste}} = 1\text{ W}/(\text{m}\cdot\text{K}) / \lambda_{\text{grease}} = 1\text{ W}/(\text{m}\cdot\text{K})$ |   | $R_{thCH}$ | 16,0         |      | K/kW                           |

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模块 / Module

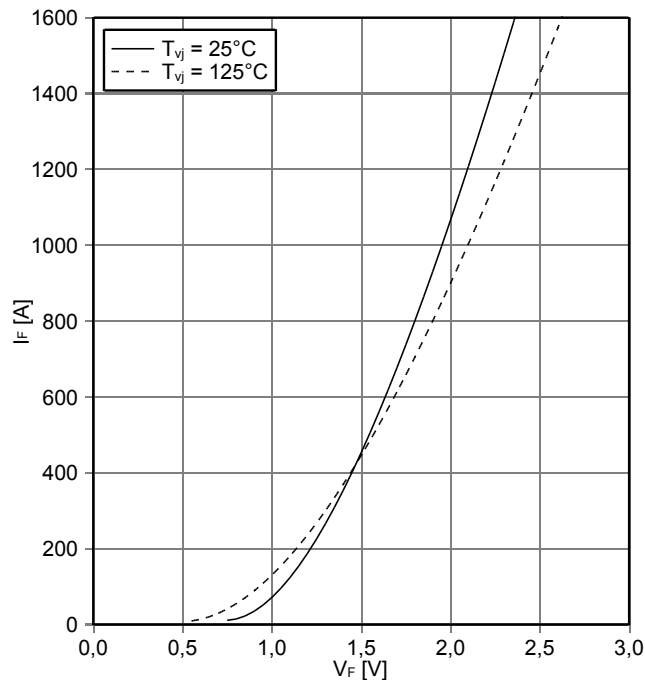
|   |   |                      |       |      |         |
|---|---|----------------------|-------|------|---------|
| 绝缘测试电压<br>Isolation test voltage                          | RMS, f = 50 Hz, t = 1 min.  | V <sub>ISOL</sub>    | 4,0   |      | kV      |
| 模块基板材料<br>Material of module baseplate                    |   |                      | AlSiC |      |         |
| 内部绝缘材料<br>Internal isolation                              | 基本绝缘 (class 1, IEC 61140)<br>basic insulation (class 1, IEC 61140)  |                      | AlN   |      |         |
| 爬电距离<br>Creepage distance                                 | 如何与取得联系- 散热片 / terminal to heatsink<br>如何与取得联系- 如何与取得联系 / terminal to terminal  |                      | 32,2  |      | mm      |
| 电气间隙<br>Clearance   | 如何与取得联系- 散热片 / terminal to heatsink<br>如何与取得联系- 如何与取得联系 / terminal to terminal  |                      | 19,1  |      | mm      |
| 相对电痕指数<br>Comperative tracking index                      |   | CTI                  | > 400 |      |         |
|   |   |                      | min.  | typ. | max.    |
| 壳 - 散热器热阻<br>Thermal resistance, case to heatsink         | 每个模块 / per module<br>$\lambda_{\text{Paste}} = 1 \text{ W/(m}\cdot\text{K)} / \lambda_{\text{grease}} = 1 \text{ W/(m}\cdot\text{K)}$ | R <sub>thCH</sub>    |       | 8,00 | K/kW    |
| 杂散电感, 模块<br>Stray inductance module                       |   | L <sub>sCE</sub>     |       | 25   | nH      |
| 模块引线电阻, 端子-芯片<br>Module lead resistance, terminals - chip | T <sub>C</sub> = 25°C, 每个开关 / per switch  | R <sub>AA'+CC'</sub> |       | 0,37 | mΩ      |
| 最大结温<br>Maximum junction temperature                      | 逆变器, 制动-斩波器 / inverter, brake-chopper   | T <sub>vj max</sub>  |       |      | 150 °C  |
| 在开关状态下温度<br>Temperature under switching conditions        | 逆变器, 制动-斩波器 / inverter, brake-chopper   | T <sub>vj op</sub>   | -40   |      | 125 °C  |
| 储存温度<br>Storage temperature                               |   | T <sub>stg</sub>     | -40   |      | 125 °C  |
| 模块安装的安装扭距<br>Mounting torque for modul mounting           | 螺丝 M6 根据相应的应用手册进行安装<br>Screw M6 - Mounting according to valid application note  | M                    | 4,25  | -    | 5,75 Nm |
| 端子联接扭距<br>Terminal connection torque                      | 螺丝 M8 根据相应的应用手册进行安装<br>Screw M8 - Mounting according to valid application note  | M                    | 1,8   | -    | 2,1 Nm  |
|   |   |                      | 8,0   | -    | 10 Nm   |
| 重量<br>Weight  |   | G                    |       | 1050 | g       |

Dynamische Daten gelten in Verbindung mit FF800R17KE3 Modul  
Dynamic data valid in conjunction with FF800R17KE3 module

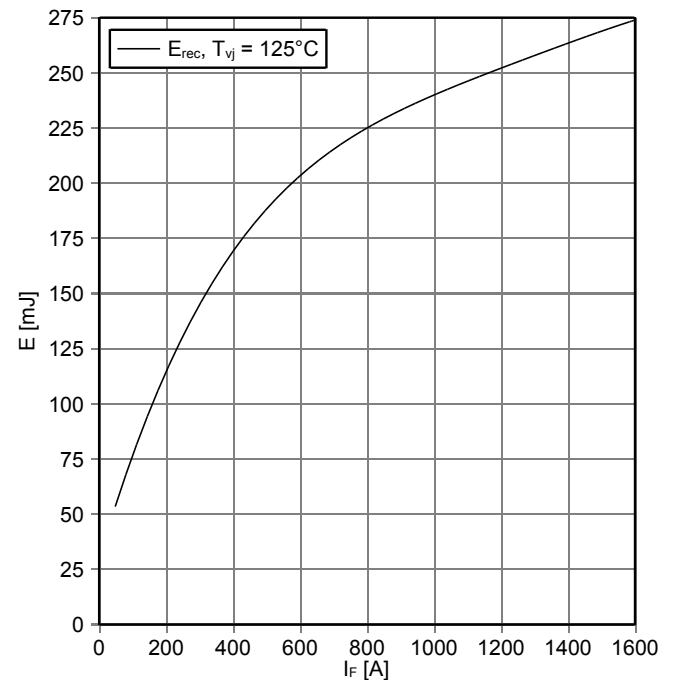
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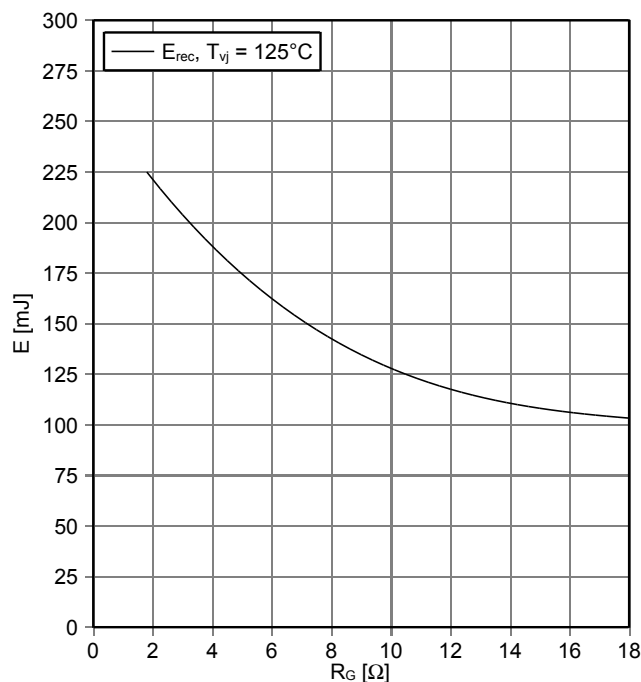
正向偏压特性 二极管,逆变器 (典型)  
forward characteristic of Diode, Inverter (typical)  
 $I_F = f(V_F)$



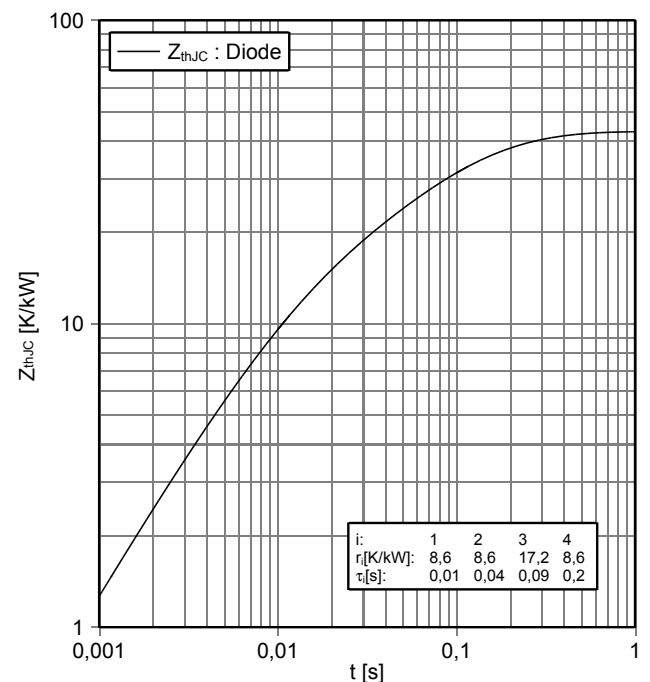
开关损耗 二极管,逆变器 (典型)  
switching losses Diode, Inverter (typical)  
 $E_{rec} = f(I_F)$   
 $R_{Gon} = \Omega, V_{CE} = 900 V$



开关损耗 二极管,逆变器 (典型)  
switching losses Diode, Inverter (typical)  
 $E_{rec} = f(R_G)$   
 $I_F = 800 A, V_{CE} = 900 V$

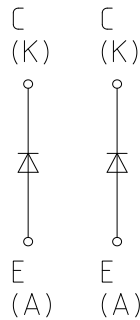


瞬态热阻抗 二极管,逆变器  
transient thermal impedance Diode, Inverter  
 $Z_{thJC} = f(t)$

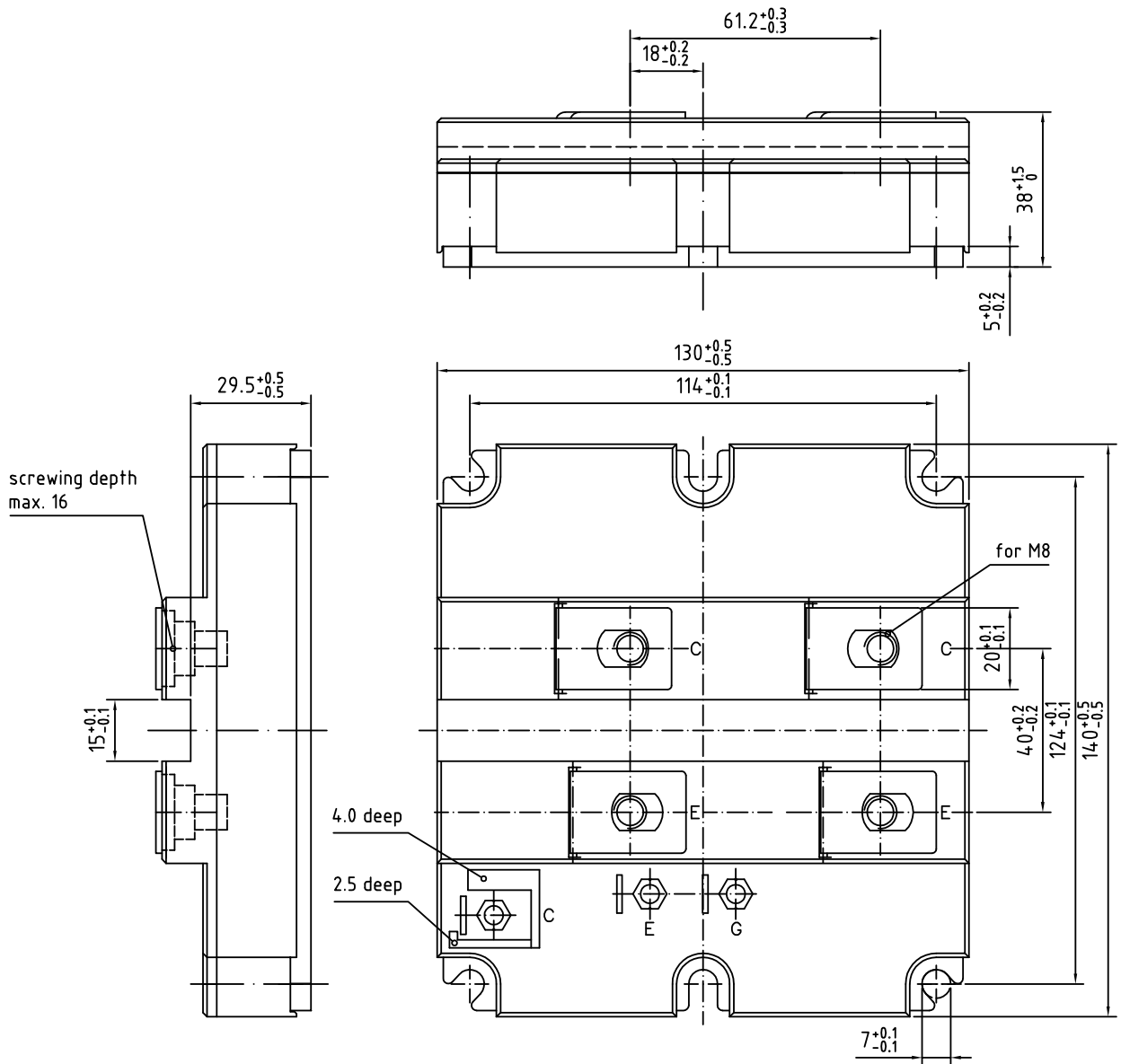


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接线图 / circuit\_diagram\_headline



封装尺寸 / package outlines



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