



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

初步数据
Preliminary Data

反向重复峰值电压 Repetitive peak reverse voltage	$T_{vj} = 25^{\circ}\text{C}$	V_{RRM}	1700	V
连续正向直流电流 Continuous DC forward current		I_F	600	A
正向重复峰值电流 Repetitive peak forward current	$t_P = 1\text{ ms}$	I_{FRM}	1200	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	81,0	kA^2s

特征值 / Characteristic Values

			min.	typ.	max.	
正向电压 Forward voltage	$I_F = 600\text{ A}, V_{GE} = 0\text{ V}$ $I_F = 600\text{ A}, V_{GE} = 0\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$	V_F	1,80 1,90	2,20	V V
反向恢复峰值电流 Peak reverse recovery current	$I_F = 600\text{ A}, -di_F/dt = 3750\text{ A}/\mu\text{s} (T_{vj}=125^{\circ}\text{C})$ $V_R = 900\text{ V}$ $V_{GE} = -15\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$	I_{RM}	590 645		A A
恢复电荷 Recovered charge	$I_F = 600\text{ A}, -di_F/dt = 3750\text{ A}/\mu\text{s} (T_{vj}=125^{\circ}\text{C})$ $V_R = 900\text{ V}$ $V_{GE} = -15\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$	Q_r	155 260		μC μC
反向恢复损耗 (每脉冲) Reverse recovery energy	$I_F = 600\text{ A}, -di_F/dt = 3750\text{ A}/\mu\text{s} (T_{vj}=125^{\circ}\text{C})$ $V_R = 900\text{ V}$ $V_{GE} = -15\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$	E_{rec}	96,0 170		mJ mJ
结 - 外壳热阻 Thermal resistance, junction to case	每个二极管 / per diode		R_{thJC}		51,0	K/kW
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}	16,0		K/kW
在开关状态下温度 Temperature under switching conditions			$T_{vj\text{ op}}$	-40	125	$^{\circ}\text{C}$

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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}	4,0		kV
内部绝缘 Internal isolation	基本绝缘 (class 1, IEC 61140) basic insulation (class 1, IEC 61140)		AISiC		
爬电距离 Creepage distance	端子- 散热片 / terminal to heatsink 端子- 端子 / terminal to terminal		32,2 32,2		mm
电气间隙 Clearance	端子- 散热片 / terminal to heatsink 端子- 端子 / terminal to terminal		19,1 19,1		mm
相对电痕指数 Comperative tracking index		CTI	> 400		
			min.	typ.	max.
外壳 - 散热器热阻 Thermal resistance, case to heatsink	每个模块 / per module $\lambda_{\text{Paste}} = 1 \text{ W}/(\text{m}\cdot\text{K}) / \lambda_{\text{grease}} = 1 \text{ W}/(\text{m}\cdot\text{K})$	R _{thCH}		8,00	K/kW
杂散电感, 模块 Stray inductance module		L _{sCE}		25	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 _{AA+CC'}		0,37	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 M6 根据相应的应用手册进行安装 Screw M6 - Mounting according to valid application note	M	4,25	-	5,75 Nm
端子联接扭矩 Terminal connection torque	螺丝 M4 根据相应的应用手册进行安装 Screw M4 - Mounting according to valid application note 螺丝 M8 根据相应的应用手册进行安装 Screw M8 - Mounting according to valid application note	M	1,8 8,0	-	2,1 10 Nm
重量 Weight		G		1050	g

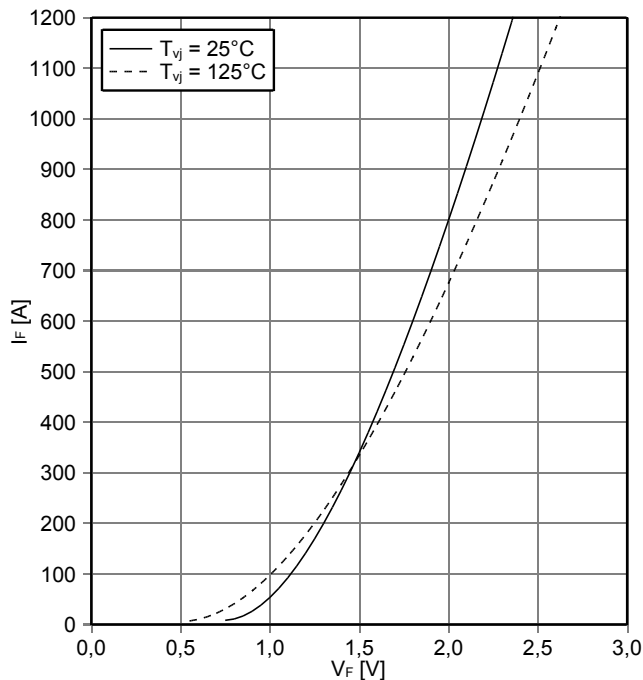
Dynamische Daten gelten in Verbindung mit FF600R17KE3 Modul
Dynamic data valid in conjunction with FF600R17KE3 module

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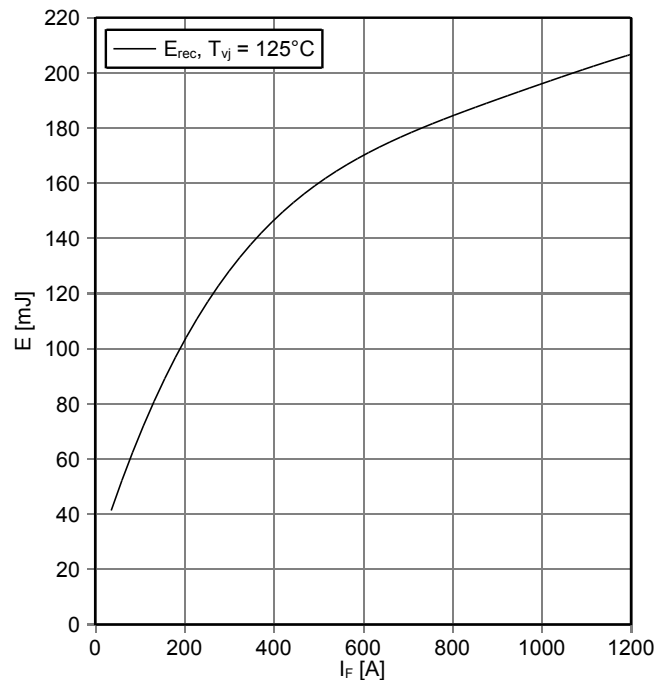


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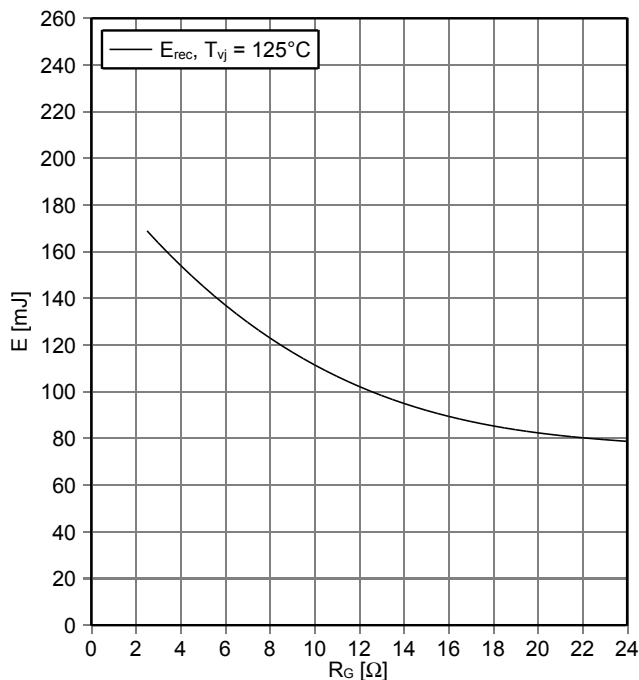
正向偏压特性 二极管,逆变器 (典型)
forward characteristic of Diode, Inverter (typical)
 $I_F = f(V_F)$



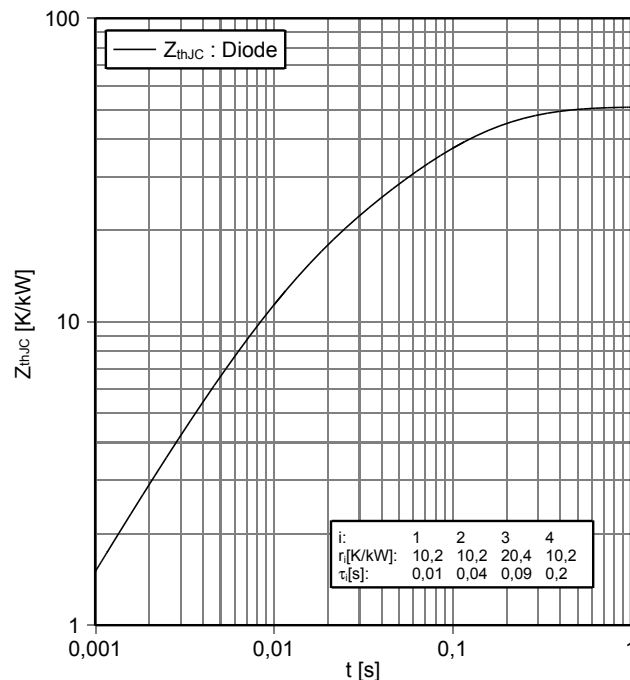
开关损耗 二极管,逆变器 (典型)
switching losses Diode, Inverter (typical)
 $E_{rec} = f(I_F)$
 $R_{Gon} = \Omega, V_{CE} = 900 V$



开关损耗 二极管,逆变器 (典型)
switching losses Diode, Inverter (typical)
 $E_{rec} = f(R_G)$
 $I_F = 600 A, V_{CE} = 900 V$



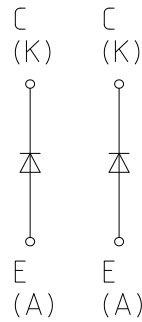
瞬态热阻抗 二极管,逆变器
transient thermal impedance Diode, Inverter
 $Z_{thJC} = f(t)$



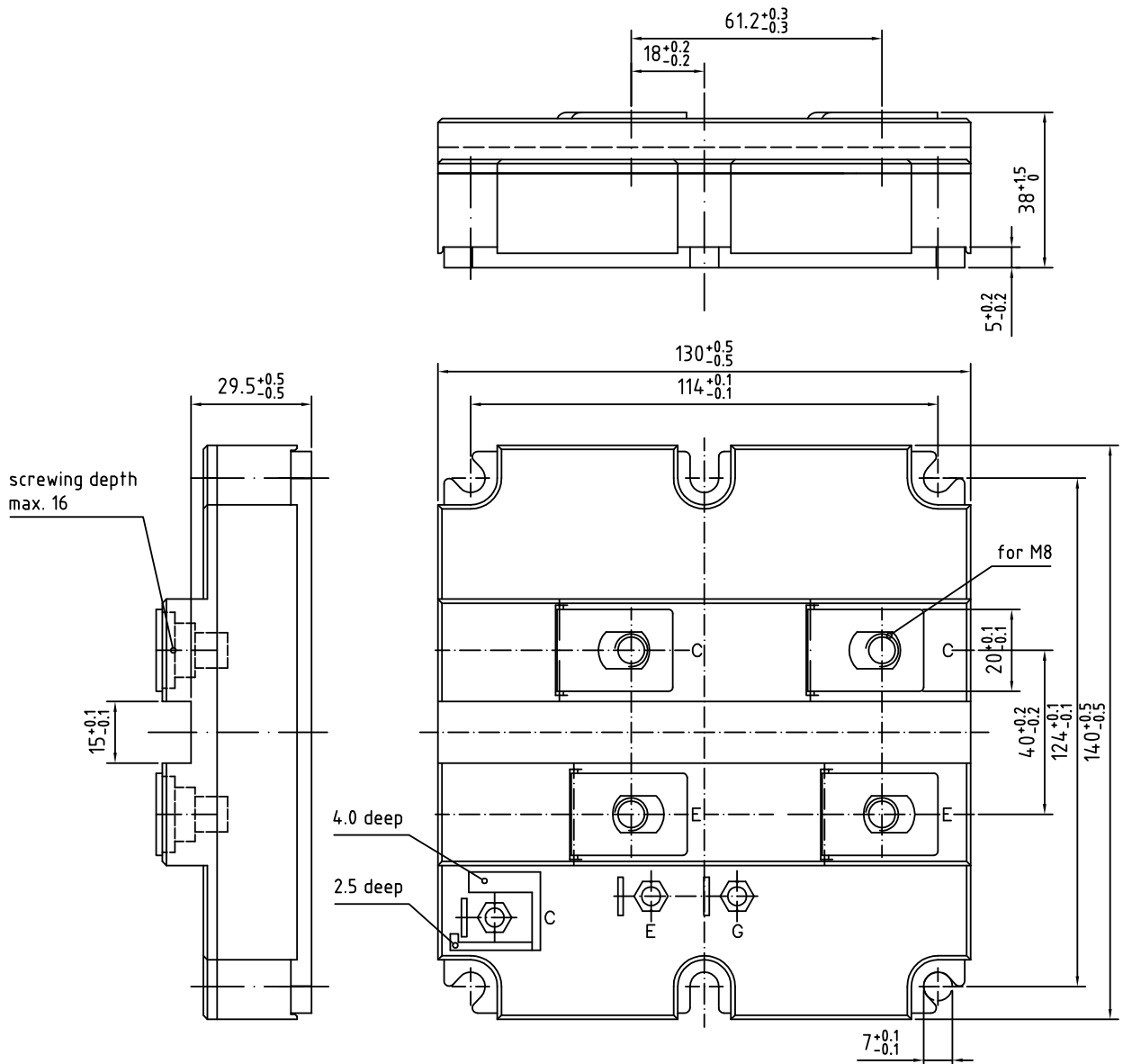
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接线图 / circuit_diagram_headline



封装尺寸 / package outlines



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使用条件和条款

使用条件和条款

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-得到质量协议的结论

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This product data sheet is describing the characteristics of this product for which a warranty is granted. Any such warranty is granted exclusively pursuant the terms and conditions of the supply agreement. There will be no guarantee of any kind for the product and its characteristics. The information in the valid application- and assembly notes of the module must be considered.

Should you require product information in excess of the data given in this product data sheet or which concerns the specific application of our product, please contact the sales office, which is responsible for you (see www.infineon.com). For those that are specifically interested we may provide application notes.

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- to perform joint Risk and Quality Assessments;

- the conclusion of Quality Agreements;

- to establish joint measures of an ongoing product survey, and that we may make delivery depended on the realization of any such measures.

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