

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	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = -25^{\circ}\text{C}$	$V_{RRM}$	3300 3300	V
连续正向直流电流 Continuous DC forward current		$I_F$	800	A
正向重复峰值电流 Repetitive peak forward current	$t_P = 1 \text{ ms}$	$I_{FRM}$	1600	A
$I^2t$ -值 $I^2t$ - value	$V_R = 0 \text{ V}$ , $t_P = 10 \text{ ms}$ , $T_{vj} = 125^{\circ}\text{C}$	$I^2t$	220	$\text{kA}^2\text{s}$
最大损耗功率 Maximum power dissipation	$T_{vj} = 125^{\circ}\text{C}$	$P_{RQM}$	1600	kW
最小开通时间 Minimum turn-on time		$t_{on \text{ min}}$	10,0	$\mu\text{s}$

特征值 / Characteristic Values

			min.	typ.	max.	
正向电压 Forward voltage	$I_F = 800 \text{ A}$ , $V_{GE} = 0 \text{ V}$ $I_F = 800 \text{ A}$ , $V_{GE} = 0 \text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$	$V_F$	2,80 2,80	3,50 3,50	V V
反向恢复峰值电流 Peak reverse recovery current	$I_F = 800 \text{ A}$ , $-di_F/dt = 4500 \text{ A}/\mu\text{s}$ ( $T_{vj}=125^{\circ}\text{C}$ ) $V_R = 1800 \text{ V}$ $V_{GE} = -15 \text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$	$I_{RM}$	1100 1300		A A
恢复电荷 Recovered charge	$I_F = 800 \text{ A}$ , $-di_F/dt = 4500 \text{ A}/\mu\text{s}$ ( $T_{vj}=125^{\circ}\text{C}$ ) $V_R = 1800 \text{ V}$ $V_{GE} = -15 \text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$	$Q_r$	500 900		$\mu\text{C}$ $\mu\text{C}$
反向恢复损耗 (每脉冲) Reverse recovery energy	$I_F = 800 \text{ A}$ , $-di_F/dt = 4500 \text{ A}/\mu\text{s}$ ( $T_{vj}=125^{\circ}\text{C}$ ) $V_R = 1800 \text{ V}$ $V_{GE} = -15 \text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$	$E_{rec}$	490 1150		mJ mJ
结 - 外壳热阻 Thermal resistance, junction to case	每个二极管 / per diode		$R_{thJC}$		26,0	K/kW
外壳 - 散热器热阻 Thermal resistance, case to heatsink	每个二极管 / per diode $\lambda_{\text{Paste}} = 1 \text{ W}/(\text{m}\cdot\text{K})$ / $\lambda_{\text{grease}} = 1 \text{ W}/(\text{m}\cdot\text{K})$		$R_{thCH}$	12,0		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 <sub>ISOL</sub>	6,0		kV
局部放电停止电压 Partial discharge extinction voltage	RMS, f = 50 Hz, Q <sub>PD</sub> ≤ 10 pC (acc. to IEC 1287)	V <sub>ISOL</sub>	2,6		kV
DC 稳定性 DC stability	T <sub>vj</sub> = 25°C, 100 fit	V <sub>CE D</sub>	1800		V
模块基板材料 Material of module baseplate			AISIC		
内部绝缘 Internal isolation	基本绝缘 (class 1, IEC 61140) basic insulation (class 1, IEC 61140)		AIN		
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 λ <sub>Paste</sub> = 1 W/(m·K) / λ <sub>grease</sub> = 1 W/(m·K)	R <sub>thCH</sub>	6,00		K/kW
杂散电感, 模块 Stray inductance module		L <sub>sCE</sub>	25		nH
模块引线电阻, 端子-芯片 Module lead resistance, terminals - chip	T <sub>c</sub> = 25°C, 每个开关 / per switch	R <sub>CC+EE'</sub>	0,34		mΩ
储存温度 Storage temperature		T <sub>stg</sub>	-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	1000		g

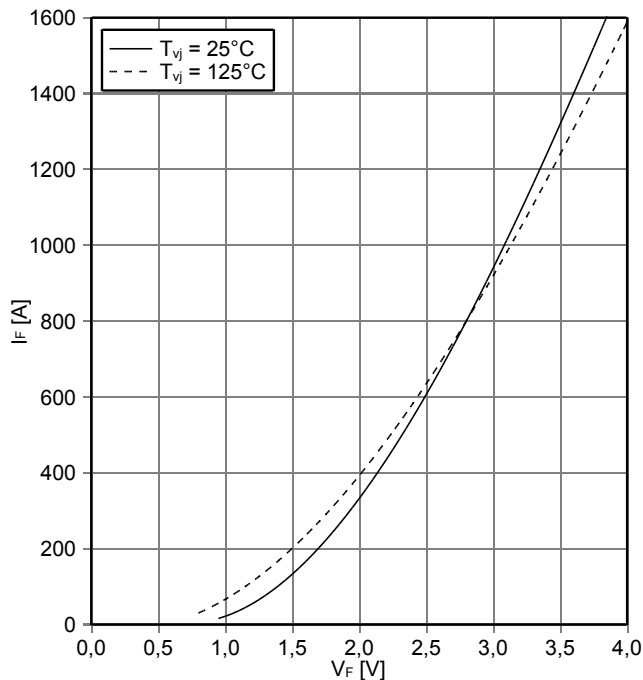
Dynamische Daten gelten in Verbindung mit FZ800R33KF2C Modul.  
Dynamic data valid in conjunction with FZ800R33KF2C module.

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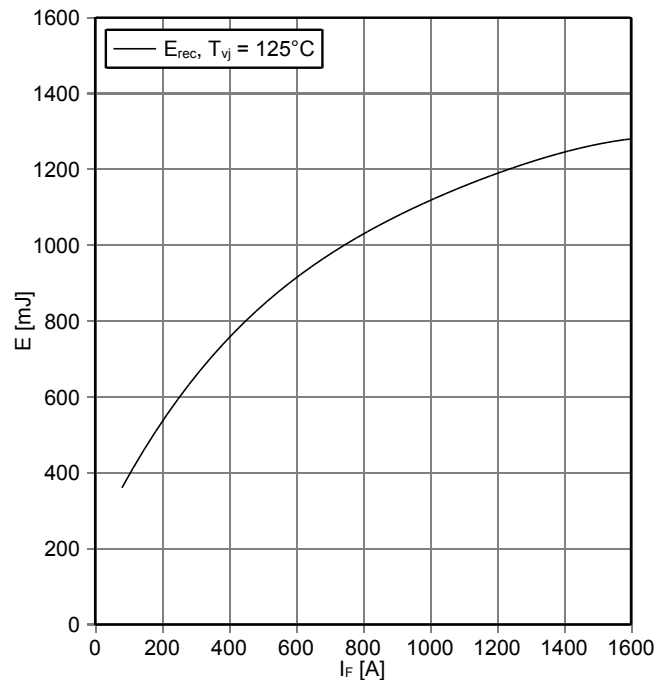
初步数据  
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正向偏压特性 二极管,逆变器 (典型)  
forward characteristic of Diode, Inverter (typical)  
 $I_F = f(V_F)$

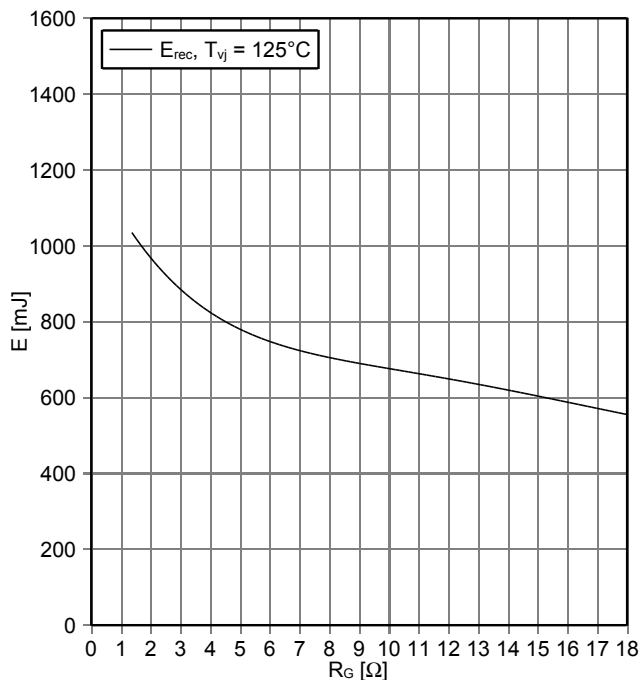


开关损耗 二极管,逆变器 (典型)  
switching losses Diode, Inverter (typical)  
 $E_{rec} = f(I_F)$

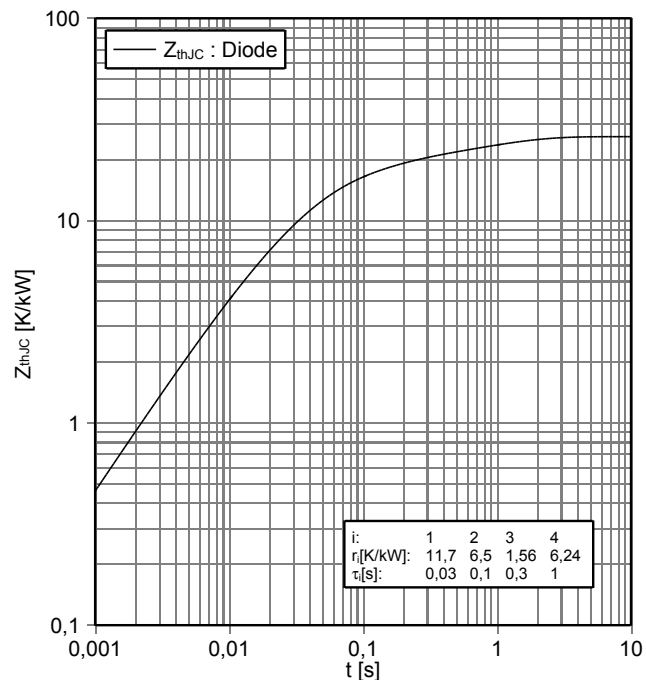
$R_{Gon} = \Omega, V_{CE} = 1800\text{ V}$



开关损耗 二极管,逆变器 (典型)  
switching losses Diode, Inverter (typical)  
 $E_{rec} = f(R_G)$   
 $I_F = 800\text{ A}, V_{CE} = 1800\text{ V}$



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



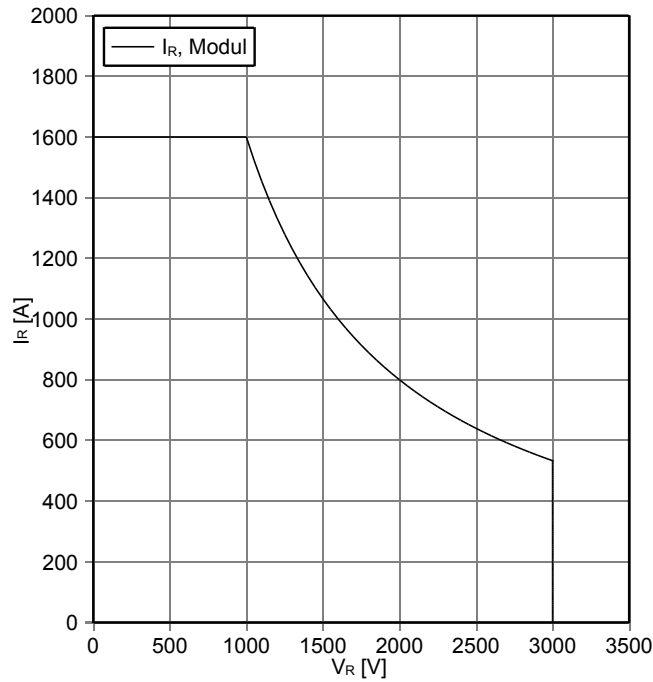
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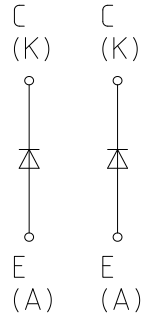
安全工作区 二极管, 逆变器 (SOA)  
safe operation area Diode, Inverter (SOA)

$I_R = f(V_R)$   
 $T_{vj} = 125^\circ\text{C}$

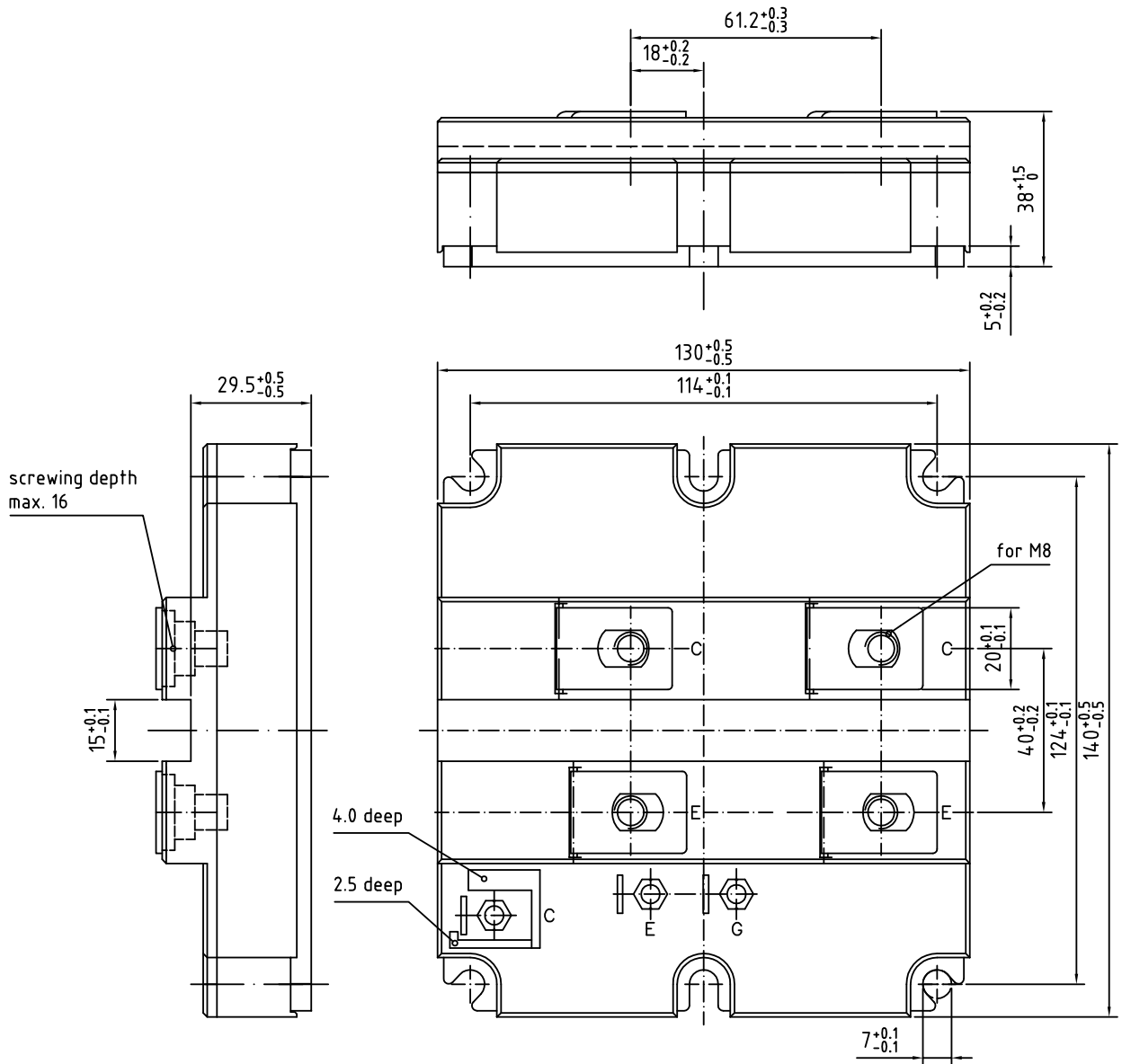


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接线图 / circuit\_diagram\_headline



封装尺寸 / package outlines



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**使用条件和条款**

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-得到质量协议的结论

-建立联合的测试和出厂产品检查，我们可以根据测试的实际情况供货

如果有必要，请根据实际需要将类似的说明给你的客户

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- 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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