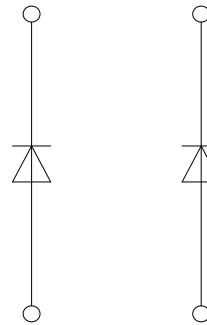


IHM-B 模块  
IHM-B module



$V_{CES} = 3300V$   
 $I_{C\ nom} = 500A / I_{CRM} = 1000A$

**典型应用**

- 中压变流器
- 电机传动
- 牵引变流器
- UPS系统
- 风力发电机

**Typical Applications**

- Medium Voltage Converters
- Motor Drives
- Traction Drives
- UPS Systems
- Wind Turbines

**电气特性**

- 高直流电压稳定性
- 低开关损耗

**Electrical Features**

- High DC Stability
- Low Switching Losses

**机械特性**

- 碳化硅铝 ( AlSiC ) 基板提供更高的温度循环能力
- 封装的 CTI > 400
- IHM B 封装
- 绝缘的基板

**Mechanical Features**

- AlSiC Base Plate for increased Thermal Cycling Capability
- Package with CTI > 400
- IHM B Housing
- Isolated Base Plate

**Module Label Code**

Barcode Code 128



DMX - Code



**Content of the Code**

Content of the Code	Digit
Module Serial Number	1 - 5
Module Material Number	6 - 11
Production Order Number	12 - 19
Datecode (Production Year)	20 - 21
Datecode (Production Week)	22 - 23

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**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	$T_{vj} = -40^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	$V_{RRM}$	3300 3300	V
连续正向直流电流 Continuous DC forward current		$I_F$	500	A
正向重复峰值电流 Repetitive peak forward current	$t_P = 1\text{ ms}$	$I_{FRM}$	1000	A
I <sup>2</sup> t-值 I <sup>2</sup> t - value	$V_R = 0\text{ V}, t_P = 10\text{ ms}, T_{vj} = 125^{\circ}\text{C}$ $V_R = 0\text{ V}, t_P = 10\text{ ms}, T_{vj} = 150^{\circ}\text{C}$	$I^2t$	65,0 61,0	kA <sup>2</sup> s kA <sup>2</sup> s
最大损耗功率 Maximum power dissipation	$T_{vj} = 125^{\circ}\text{C}$	$P_{RQM}$	800	kW
最小开通时间 Minimum turn-on time		$t_{on\ min}$	10,0	$\mu\text{s}$

**特征值 / Characteristic Values**

			min.	typ.	max.	
正向电压 Forward voltage	$I_F = 500\text{ A}, V_{GE} = 0\text{ V}$ $I_F = 500\text{ A}, V_{GE} = 0\text{ V}$ $I_F = 500\text{ A}, V_{GE} = 0\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	$V_F$	3,10 2,75 2,65	3,85 3,25	V V V
反向恢复峰值电流 Peak reverse recovery current	$I_F = 500\text{ A}, -di_F/dt = 1500\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$ $V_R = 1800\text{ V}$ $V_{GE} = -15\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	$I_{RM}$	500 600 625		A A A
恢复电荷 Recovered charge	$I_F = 500\text{ A}, -di_F/dt = 1500\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$ $V_R = 1800\text{ V}$ $V_{GE} = -15\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	$Q_r$	225 450 525		$\mu\text{C}$ $\mu\text{C}$ $\mu\text{C}$
反向恢复损耗 (每脉冲) Reverse recovery energy	$I_F = 500\text{ A}, -di_F/dt = 1500\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$ $V_R = 1800\text{ V}$ $V_{GE} = -15\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	$E_{rec}$	225 550 650		mJ mJ mJ
结 - 外壳热阻 Thermal resistance, junction to case	每个二极管 / per diode		$R_{thJC}$		43,0	K/kW
外壳 - 散热器热阻 Thermal resistance, case to heatsink	每个二极管 / per diode $\lambda_{Paste} = 1\text{ W}/(\text{m}\cdot\text{K})$ / $\lambda_{grease} = 1\text{ W}/(\text{m}\cdot\text{K})$		$R_{thCH}$	16,5		K/kW
在开关状态下温度 Temperature under switching conditions			$T_{vj\ op}$	-40	150	$^{\circ}\text{C}$

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**模块 / Module**

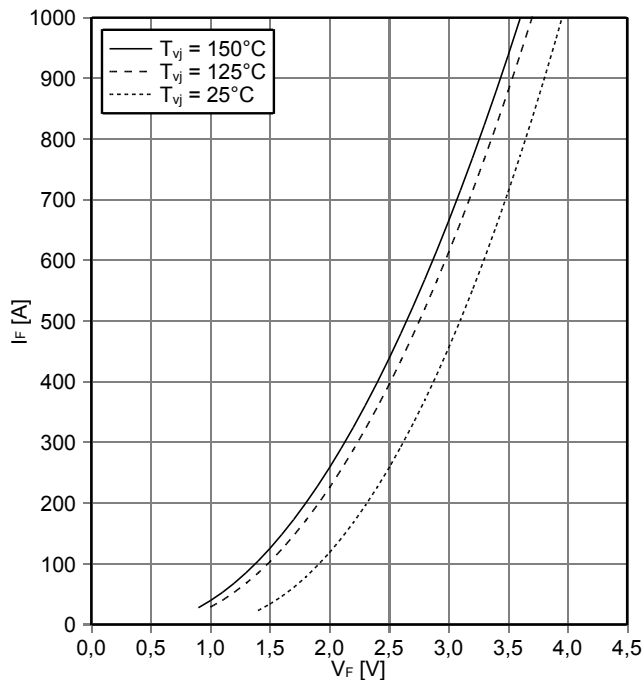
绝缘测试电压 Isolation test voltage	RMS, f = 50 Hz, t = 1 min.	V <sub>ISOL</sub>	6,0		kV
局部放电停止电压 Partial discharge extinction voltage	RMS, f = 50 Hz, Q <sub>PD</sub> ≤ 10 pC (acc. to IEC 1287)	V <sub>ISOL</sub>	2,6		kV
DC 稳定性 DC stability	T <sub>vj</sub> = 25°C, 100 fit	V <sub>CE D</sub>	2100		V
模块基板材料 Material of module baseplate			AISiC		
爬电距离 Creepage distance	端子- 散热片 / terminal to heatsink 端子- 端子 / terminal to terminal		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		mm
相对电痕指数 Comperative tracking index		CTI	> 400		
			min.	typ.	max.
杂散电感,模块 Stray inductance module		L <sub>SCE</sub>		18	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>AA'+CC'</sub>		0,37	mΩ
储存温度 Storage temperature		T <sub>stg</sub>	-40		150 °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		800	g

Dynamische Daten gelten in Verbindung mit FZ500R33HE3 Modul.  
Dynamic Data valid in conjunction with FZ500R33HE3 module.

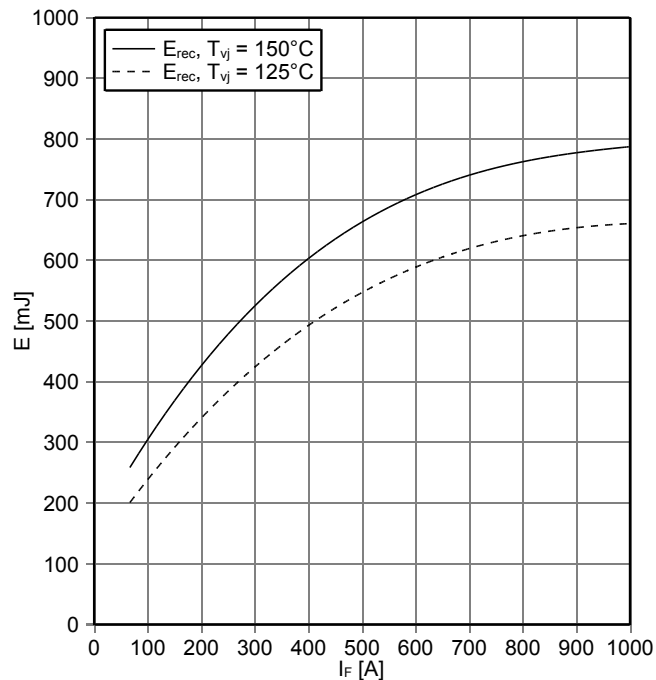
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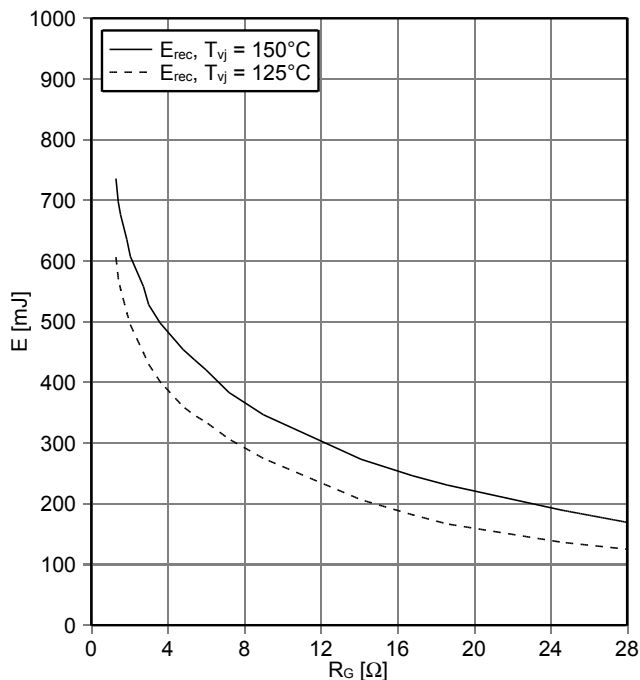
正向偏压特性 二极管,逆变器 (典型)  
forward characteristic of Diode, Inverter (typical)  
 $I_F = f(V_F)$



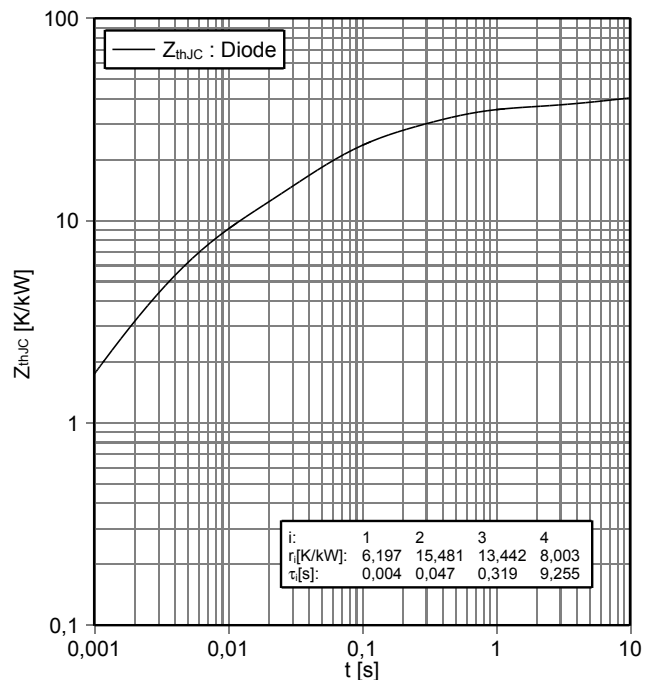
开关损耗 二极管,逆变器 (典型)  
switching losses Diode, Inverter (typical)  
 $E_{rec} = f(I_F)$   
 $R_{Gon} = \Omega, V_{CE} = 1800\text{ V}$



开关损耗 二极管,逆变器 (典型)  
switching losses Diode, Inverter (typical)  
 $E_{rec} = f(R_G)$   
 $I_F = 500\text{ A}, V_{CE} = 1800\text{ V}$



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

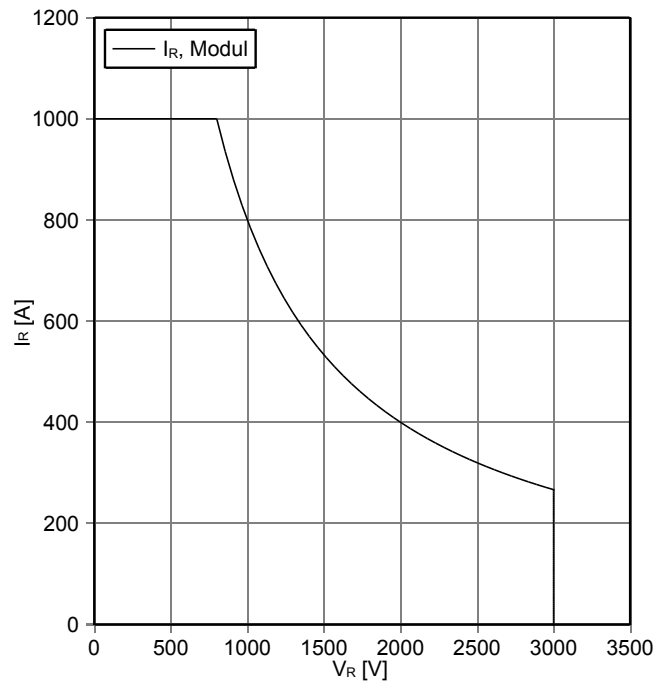


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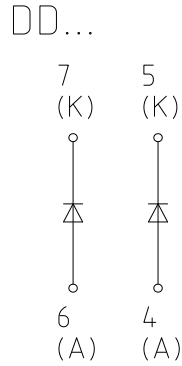
安全工作区 二极管, 逆变器 (SOA)  
safe operation area Diode, Inverter (SOA)

$I_R = f(V_R)$   
 $T_{vj} = 150^\circ\text{C}$

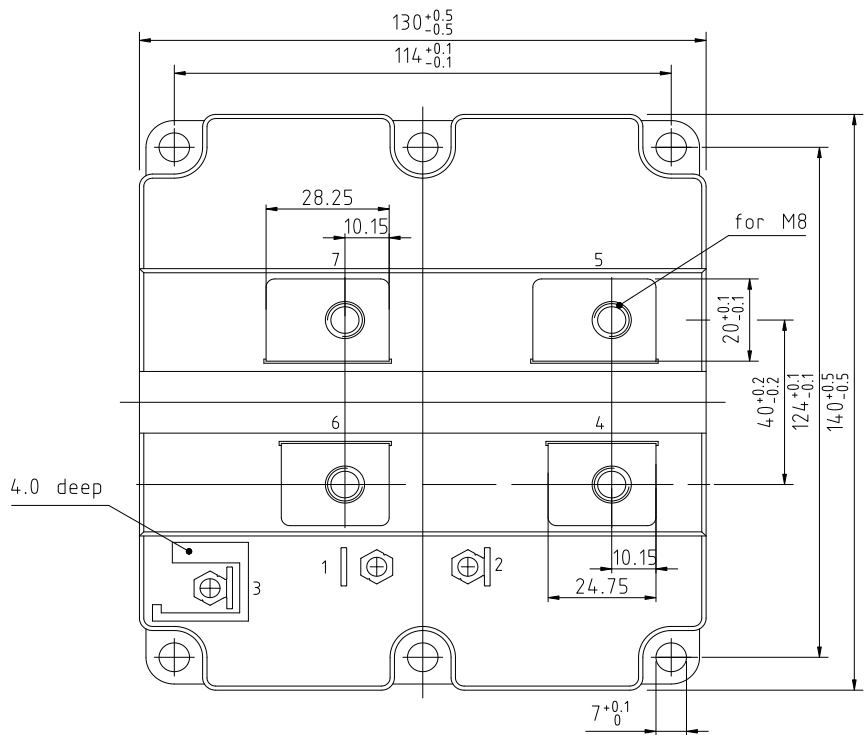
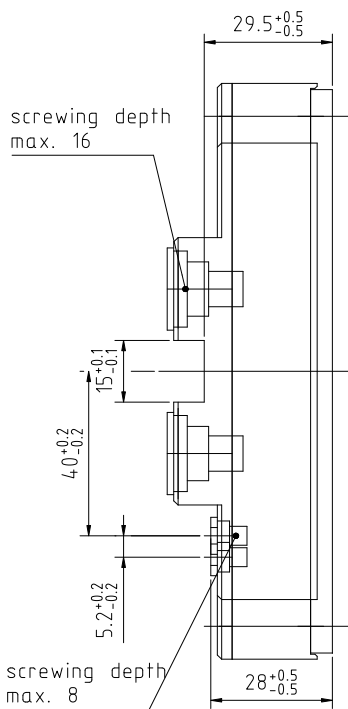
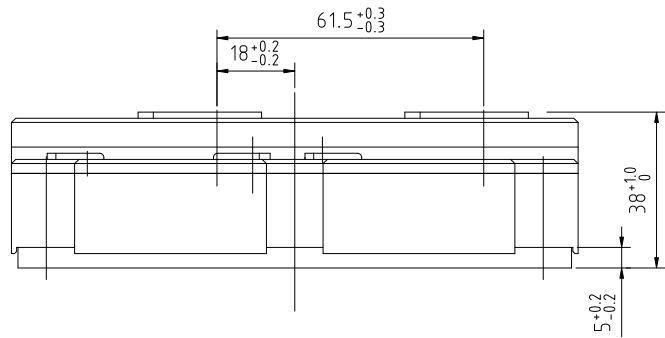


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接线图 / circuit\_diagram\_headline



封装尺寸 / package outlines



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**使用条件和条款**

**使用条件和条款**

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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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