

# 技术信息 / Technical Information

IGBT-模块  
IGBT-modules

## DZ800S17K3



62mm C-Serien Modul mit Emitter Controlled<sup>3</sup> Diode  
62mm C-series module with Emitter Controlled<sup>3</sup> diode

### 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	$T_{vj} = 25^{\circ}\text{C}$	$V_{RRM}$	1700	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	$V_R = 0 \text{ V}, t_P = 10 \text{ ms}, T_{vj} = 125^{\circ}\text{C}$	$I^2t$	99500	$\text{A}^2\text{s}$

#### 特征值 / Characteristic Values

			min.	typ.	max.	
正向电压 Forward voltage	$I_F = 800 \text{ A}, V_{GE} = 0 \text{ V}$ $I_F = 800 \text{ A}, V_{GE} = 0 \text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$	$V_F$	1,80 1,90	2,20	V V
反向恢复峰值电流 Peak reverse recovery current	$I_F = 800 \text{ A}, -di_F/dt = 4900 \text{ A}/\mu\text{s} (T_{vj}=125^{\circ}\text{C})$ $V_R = 900 \text{ V}$ $V_{GE} = -15 \text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$	$I_{RM}$	780 850		A A
恢复电荷 Recovered charge	$I_F = 800 \text{ A}, -di_F/dt = 4900 \text{ A}/\mu\text{s} (T_{vj}=125^{\circ}\text{C})$ $V_R = 900 \text{ V}$ $V_{GE} = -15 \text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$	$Q_r$	205 345		$\mu\text{C}$ $\mu\text{C}$
反向恢复损耗 (每脉冲) Reverse recovery energy	$I_F = 800 \text{ A}, -di_F/dt = 4900 \text{ A}/\mu\text{s} (T_{vj}=125^{\circ}\text{C})$ $V_R = 900 \text{ V}$ $V_{GE} = -15 \text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$	$E_{rec}$	130 225		mJ mJ
结 - 外壳热阻 Thermal resistance, junction to case	每个二极管 / per diode		$R_{thJC}$		0,058	K/W
外壳 - 散热器热阻 Thermal resistance, case to heatsink	每个二极管 / per diode $\lambda_{\text{Paste}} = 1 \text{ W}/(\text{m}\cdot\text{K}) / \lambda_{\text{grease}} = 1 \text{ W}/(\text{m}\cdot\text{K})$		$R_{thCH}$	0,01		K/W
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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初步数据  
Preliminary Data

模块 / Module

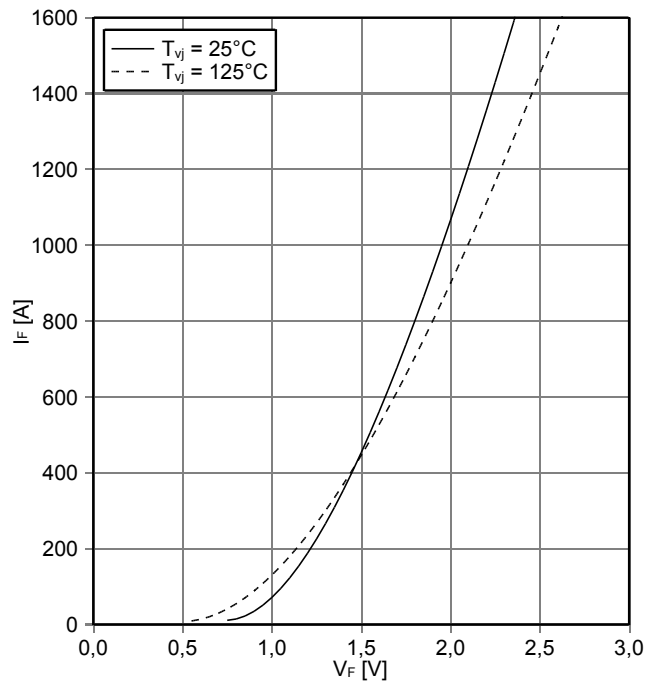
绝缘测试电压 Isolation test voltage	RMS, f = 50 Hz, t = 1 min.	V <sub>ISOL</sub>	4,0		kV
模块基板材料 Material of module baseplate			Cu		
内部绝缘 Internal isolation	基本绝缘 (class 1, IEC 61140) basic insulation (class 1, IEC 61140)		Al <sub>2</sub> O <sub>3</sub>		
爬电距离 Creepage distance	端子- 散热片 / terminal to heatsink 端子- 端子 / terminal to terminal		25,0 19,0		mm
电气间隙 Clearance	端子- 散热片 / terminal to heatsink 端子- 端子 / terminal to terminal		25,0 10,0		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 $\lambda_{\text{Paste}} = 1 \text{ W/(m}\cdot\text{K)} / \lambda_{\text{grease}} = 1 \text{ W/(m}\cdot\text{K)}$	R <sub>thCH</sub>		0,01	K/W
杂散电感, 模块 Stray inductance module		L <sub>sCE</sub>		16	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>		0,50	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	3,00	-	6,00 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 M6 根据相应的应用手册进行安装 Screw M6 - Mounting according to valid application note	M	1,1 2,5	-	2,0 5,0 Nm
重量 Weight		G		340	g

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

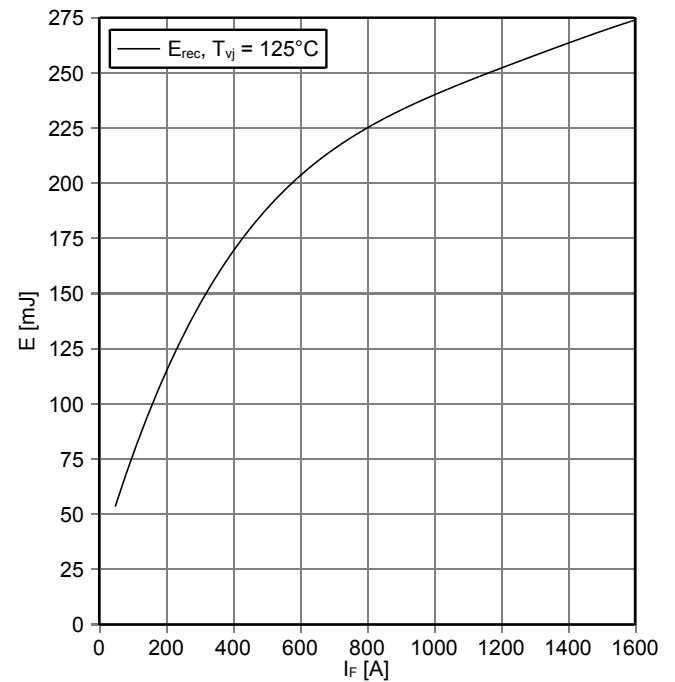
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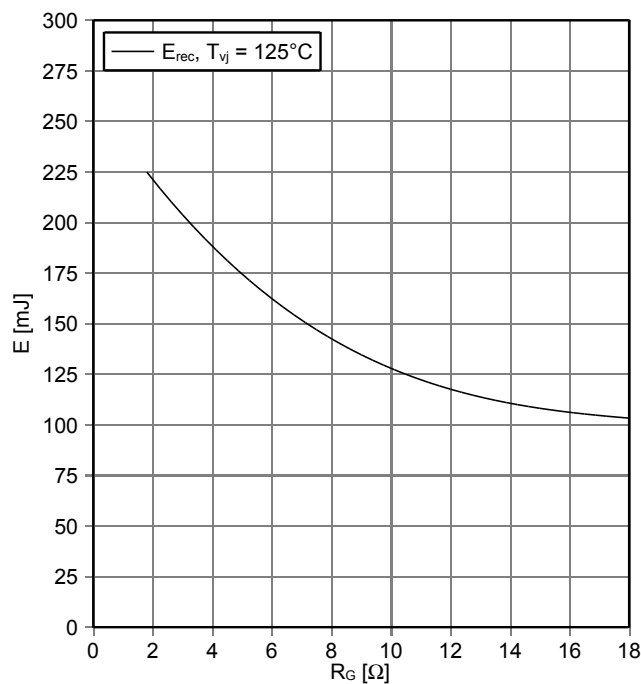
正向偏压特性 二极管, 逆变器 (典型)  
forward characteristic of Diode, Inverter (typical)  
 $I_F = f(V_F)$



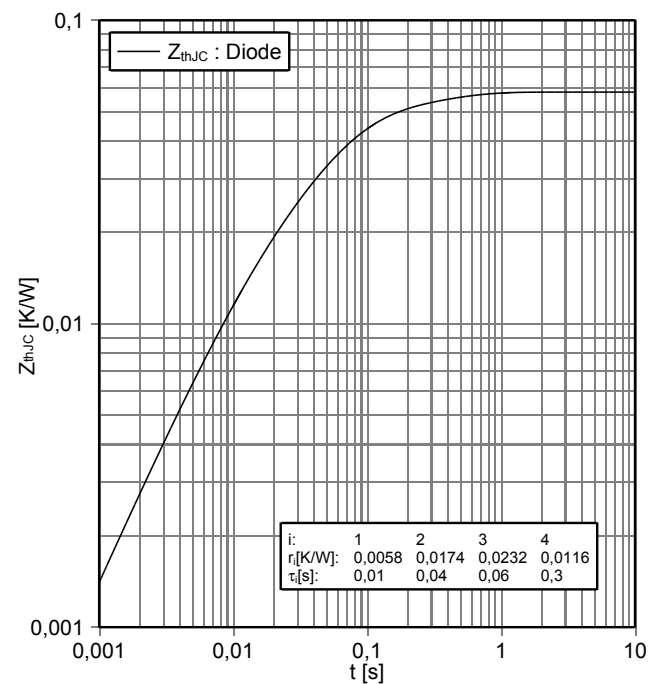
开关损耗 二极管, 逆变器 (典型)  
switching losses Diode, Inverter (typical)  
 $E_{rec} = f(I_F)$   
 $R_{Gon} = \Omega, V_{CE} = 900\text{ V}$



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

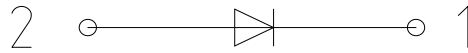


瞬态热阻抗 二极管, 逆变器  
transient thermal impedance Diode, Inverter  
 $Z_{thJC} = f(t)$

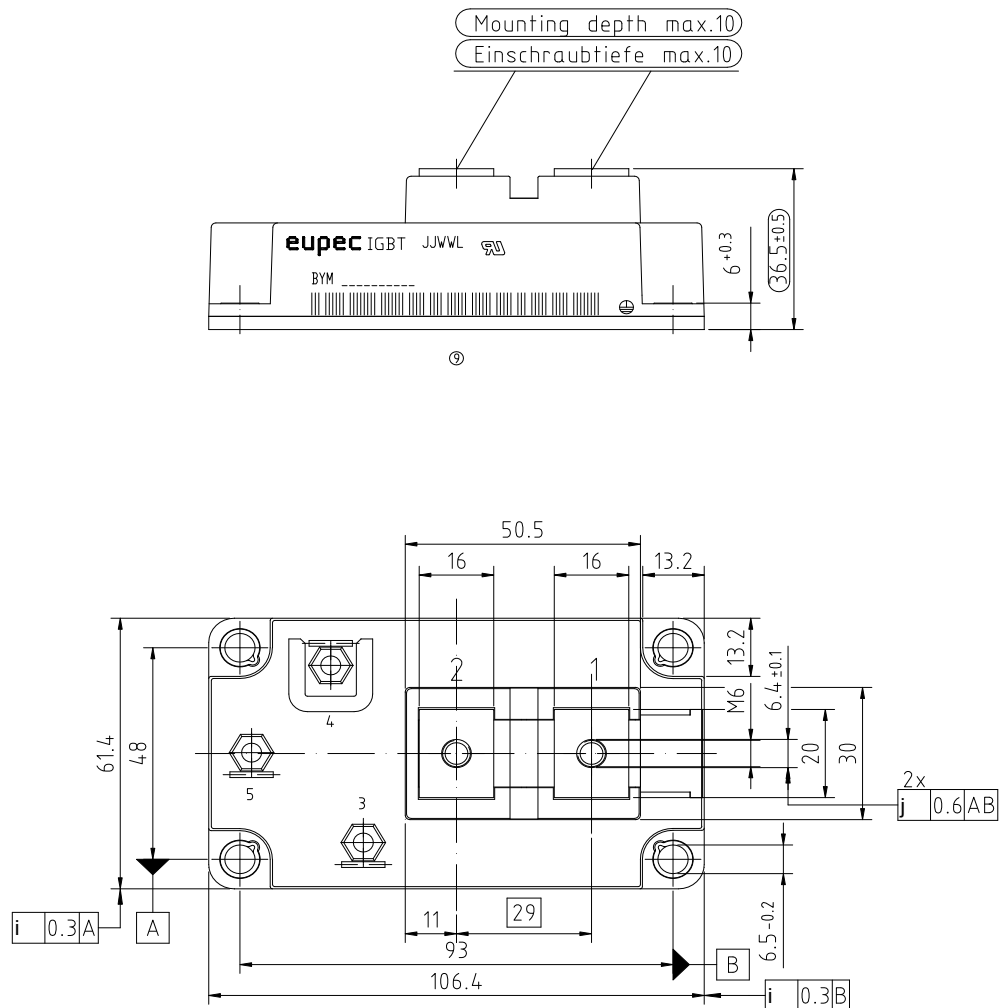


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接线图 / circuit\_diagram\_headline



封装尺寸 / package outlines



Az12

Freimaßtoleranzen  
nach ISO2768 mH

General tolerance  
ISO2768 mH

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**使用条件和条款**

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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.

If and to the extent necessary, please forward equivalent notices to your customers.

Changes of this product data sheet are reserved.

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