

技术信息 / Technical Information

IGBT-模块
IGBT-modules

DZ800S17K3



62mm C-Serien Modul mit Emitter Controlled³ Diode
62mm C-series module with Emitter Controlled³ 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	A^2s

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		μC μC
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

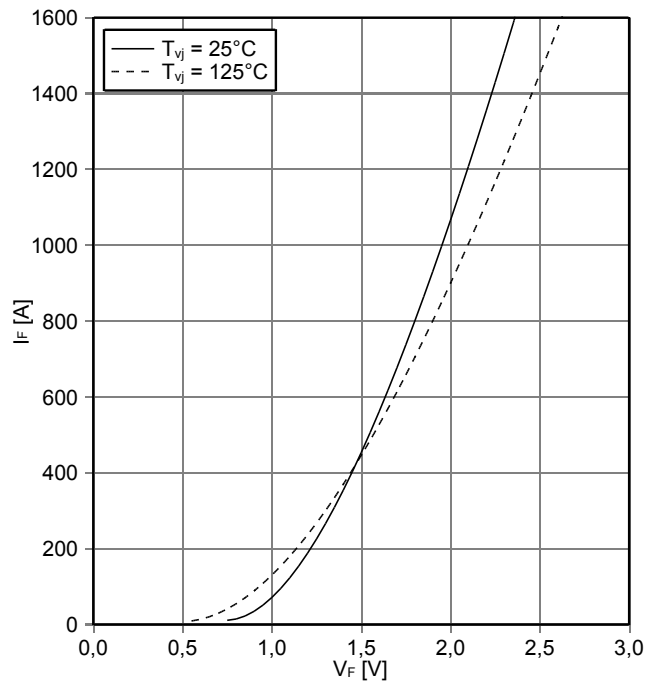
绝缘测试电压 Isolation test voltage	RMS, f = 50 Hz, t = 1 min.	V _{ISOL}	4,0		kV
模块基板材料 Material of module baseplate			Cu		
内部绝缘 Internal isolation	基本绝缘 (class 1, IEC 61140) basic insulation (class 1, IEC 61140)		Al ₂ O ₃		
爬电距离 Creepage distance	端子- 散热片 / terminal to heatsink 端子- 端子 / terminal to terminal		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 _{thCH}		0,01	K/W
杂散电感, 模块 Stray inductance module		L _{sCE}		16	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 _{CC'+EE'}		0,50	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	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

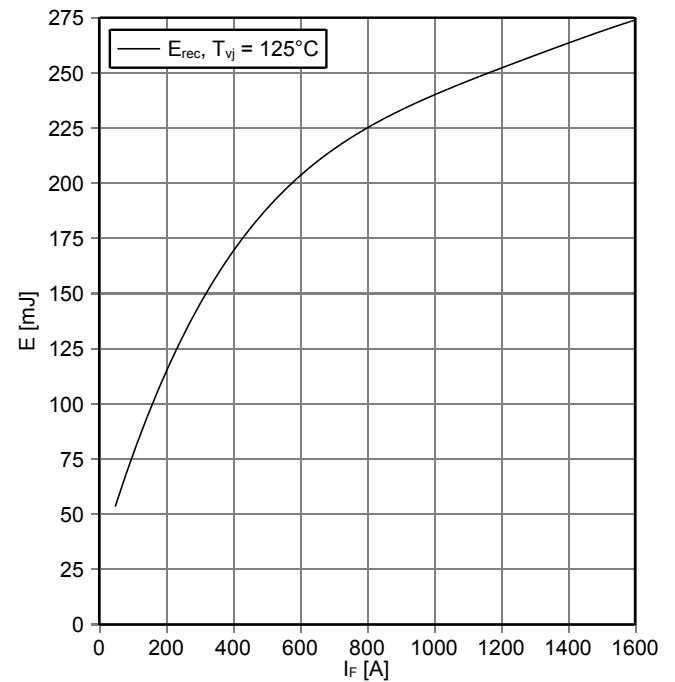
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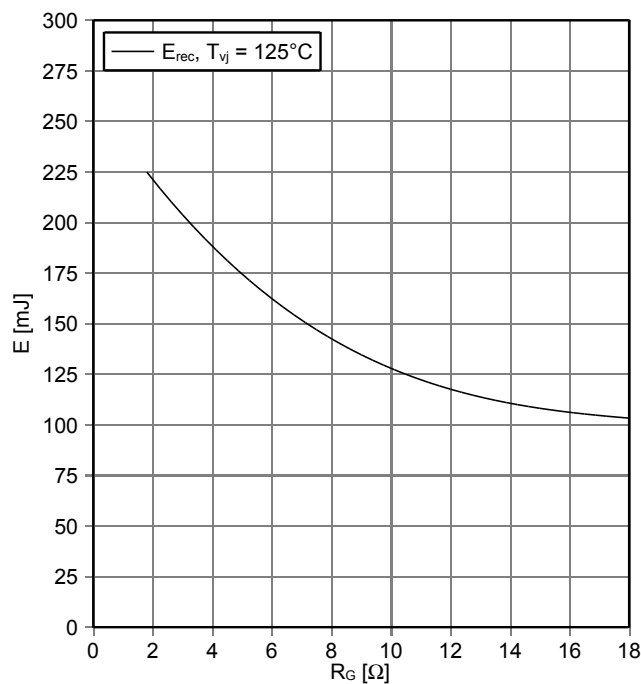
正向偏压特性 二极管, 逆变器 (典型)
forward characteristic of Diode, Inverter (typical)
 $I_F = f(V_F)$



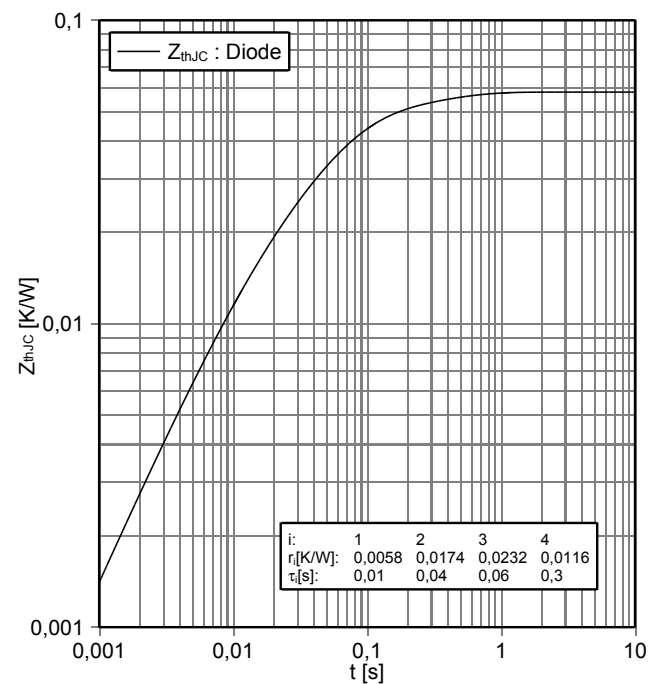
开关损耗 二极管, 逆变器 (典型)
switching losses Diode, Inverter (typical)
 $E_{rec} = f(I_F)$
 $R_{Gon} = \Omega, V_{CE} = 900\text{ V}$



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

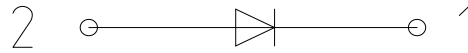


瞬态热阻抗 二极管, 逆变器
transient thermal impedance Diode, Inverter
 $Z_{thJC} = f(t)$

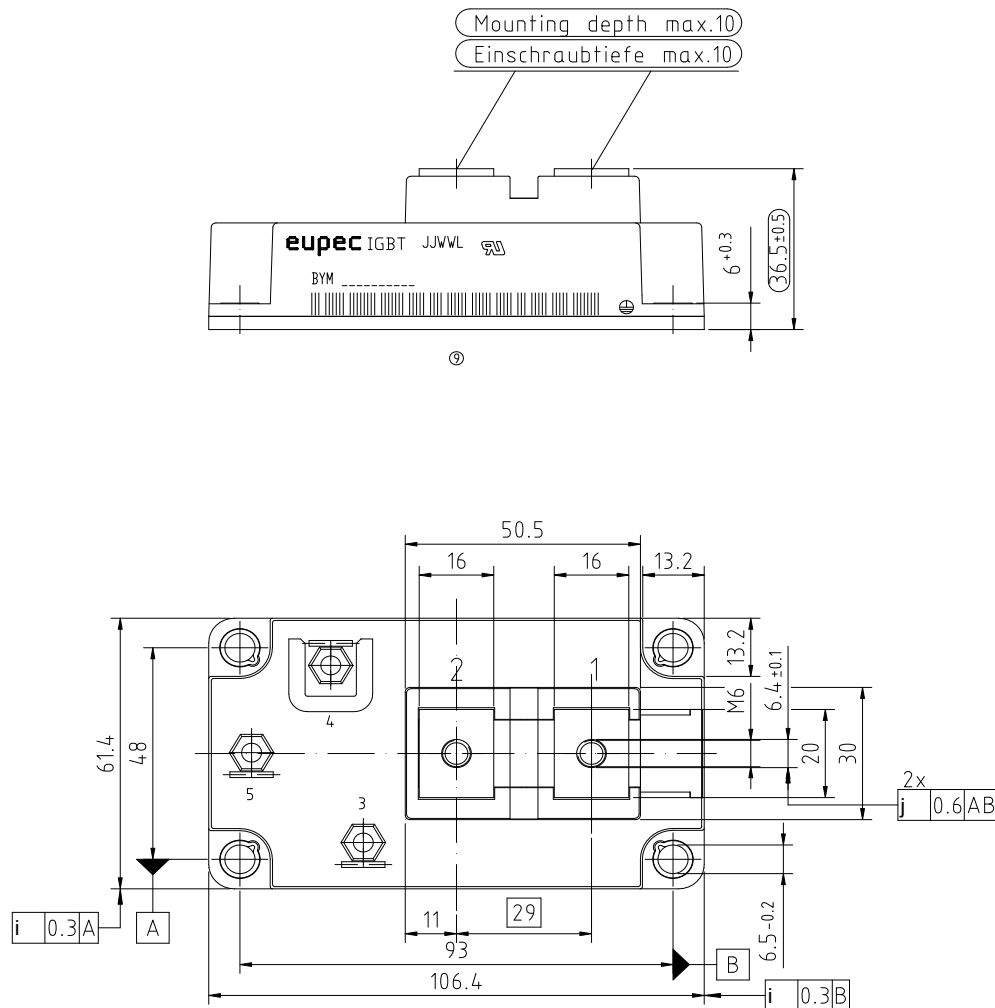


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接线图 / circuit_diagram_headline



封装尺寸 / package outlines



Az12

Freimaßtoleranzen
nach ISO2768 mH

General tolerance
ISO2768 mH

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**初步数据
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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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