

反向二极管 / Diode, Reverse

最大额定值 / Maximum Rated Values

反向重复峰值电压 Repetitive peak reverse voltage	$T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = -50^{\circ}\text{C}$	V_{RRM}	6500 6300 5700	V
连续正向直流电流 Continuous DC forward current		I_F	200	A
正向重复峰值电流 Repetitive peak forward current	$t_P = 1 \text{ ms}$	I_{FRM}	400	A
I ² t-值 I ² t - value	$V_R = 0 \text{ V}, t_P = 10 \text{ ms}, T_{vj} = 125^{\circ}\text{C}$	I^2t	26,0	kA ² s
最大损耗功率 Maximum power dissipation	$T_{vj} = 125^{\circ}\text{C}$	P_{RQM}	600	kW
最小开通时间 Minimum turn-on time		$t_{on \text{ min}}$	10,0	μs

特征值 / Characteristic Values

				min.	typ.	max.	
正向电压 Forward voltage	$I_F = 200 \text{ A}, V_{GE} = 0 \text{ V}$ $I_F = 200 \text{ A}, V_{GE} = 0 \text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$	V_F	3,00	3,80 3,90	4,60 4,70	V V
反向恢复峰值电流 Peak reverse recovery current	$I_F = 200 \text{ A}, -di_F/dt = 700 \text{ A}/\mu\text{s} (T_{vj}=125^{\circ}\text{C})$ $V_R = 3600 \text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$	I_{RM}		270 330		A A
恢复电荷 Recovered charge	$I_F = 200 \text{ A}, -di_F/dt = 700 \text{ A}/\mu\text{s} (T_{vj}=125^{\circ}\text{C})$ $V_R = 3600 \text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$	Q_r		180 350		μC μC
反向恢复损耗 (每脉冲) Reverse recovery energy	$I_F = 200 \text{ A}, -di_F/dt = 700 \text{ A}/\mu\text{s} (T_{vj}=125^{\circ}\text{C})$ $V_R = 3600 \text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$	E_{rec}		220 550		mJ mJ
结 - 外壳热阻 Thermal resistance, junction to case	每个二极管 / per diode		R_{thJC}			46,5	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			$T_{vj \text{ op}}$	-50		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}	10,2		kV
局部放电停止电压 Partial discharge extinction voltage	RMS, f = 50 Hz, Q _{PD} typ 10 pC (acc. to IEC 1287)	V _{ISOL}	5,1		kV
DC 稳定性 DC stability	T _{vj} = 25°C, 100 fit	V _{CE D}	3700		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- 散热器 / terminal to heatsink 端子- 端子 / terminal to terminal		56,0 56,0		mm
电气间隙 Clearance	端子- 散热器 / terminal to heatsink 端子- 端子 / terminal to terminal		26,0 26,0		mm
相对电痕指数 Comperative tracking index		CTI	> 600		
			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 _{CC+EE'} R _{AA+CC'}		0,37 0,37	mΩ
储存温度 Storage temperature		T _{stg}	-55		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

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