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°C T_{vj} = -25°C	V_{RRM}	3300 3300	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 ms	I_{FRM}	400	A
I2t-值 I²t - value	V_R = 0 V, t_P = 10 ms, T_{vj} = 125°C	I²t	14,0	kA²s
最大损耗功率 Maximum power dissipation	T_{vj} = 125°C	P_{RQM}	400	kW
最小开通时间 Minimum turn-on time		$t_{on\ min}$	10,0	µs

特征值 / Characteristic Values

			min.	typ.	max.	
正向电压 Forward voltage	I_F = 200 A, V_{GE} = 0 V I_F = 200 A, V_{GE} = 0 V	T_{vj} = 25°C T_{vj} = 125°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 = 200 A, - di_F/dt = 1100 A/µs (T_{vj}=125°C) V_R = 1800 V V_{GE} = -15 V	T_{vj} = 25°C T_{vj} = 125°C	I_{RM}		275 325		A A
恢复电荷 Recovered charge	I_F = 200 A, - di_F/dt = 1100 A/µs (T_{vj}=125°C) V_R = 1800 V V_{GE} = -15 V	T_{vj} = 25°C T_{vj} = 125°C	Q_r		120 220		µC µC
反向恢复损耗（每脉冲） Reverse recovery energy	I_F = 200 A, - di_F/dt = 1100 A/µs (T_{vj}=125°C) V_R = 1800 V V_{GE} = -15 V	T_{vj} = 25°C T_{vj} = 125°C	E_{rec}		125 255		mJ mJ
结 - 外壳热阻 Thermal resistance, junction to case	每个二极管 / per diode		R_{thJC}			108	K/kW
外壳 - 散热器热阻 Thermal resistance, case to heatsink	每个二极管 / per diode λ_{Paste} = 1 W/(m·K) / λ_{grease} = 1 W/(m·K)		R_{thCH}		33,0		K/kW
在开关状态下温度 Temperature under switching conditions			$T_{vj\ op}$	-40		125	°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}		6,0		kV
局部放电停止电压 Partial discharge extinction voltage	RMS, f = 50 Hz, Q_{PD} ≤ 10 pC (acc. to IEC 1287)	V_{ISOL}		2,6		kV
DC 稳定性 DC stability	T_{vj} = 25°C, 100 fit	$V_{CE\ D}$		1800		V
模块基板材料 Material of module baseplate				AlSiC		
内部绝缘 Internal isolation	基本绝缘 (class 1, IEC 61140) basic insulation (class 1, IEC 61140)			AlN		
爬电距离 Creepage distance	端子至散热器 / terminal to heatsink 端子至端子 / terminal to terminal			32,2 32,2		mm
电气间隙 Clearance	端子至散热器 / terminal to heatsink 端子至端子 / 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_{Paste} = 1 W/(m·K) / λ_{grease} = 1 W/(m·K)	R_{thCH}		16,0		K/kW
杂散电感,模块 Stray inductance module		L_{sCE}		58		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	$R_{CC'+EE'}$		0,78		mΩ
储存温度 Storage temperature		T_{stg}	-40		125	°C
模块安装的安装扭距 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
端子联接扭距 Terminal connection torque	螺丝 M5 根据相应的应用手册进行安装 Screw M5 - Mounting according to valid application note	M	3,6	-	4,2	Nm
重量 Weight		G		500		g

Dynamische Daten gelten in Verbindung mit FF200R33KF2C Modul.
Dynamic data valid in conjunction with FF200R33KF2C module.

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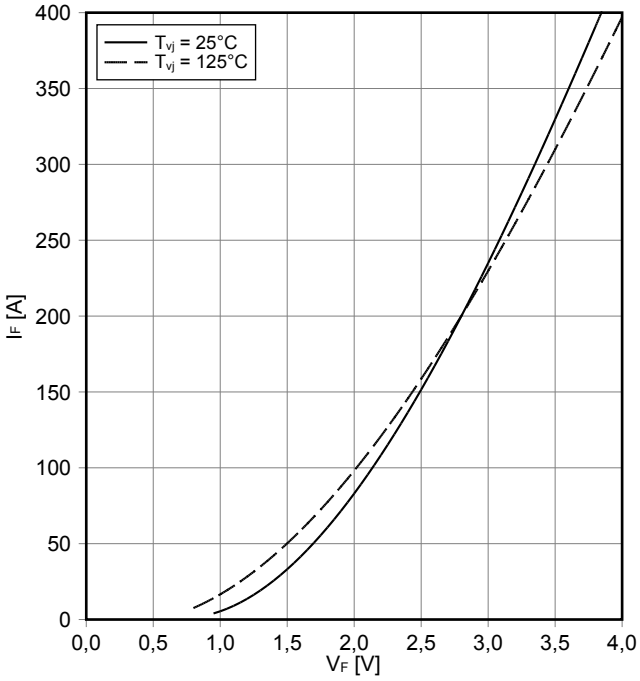
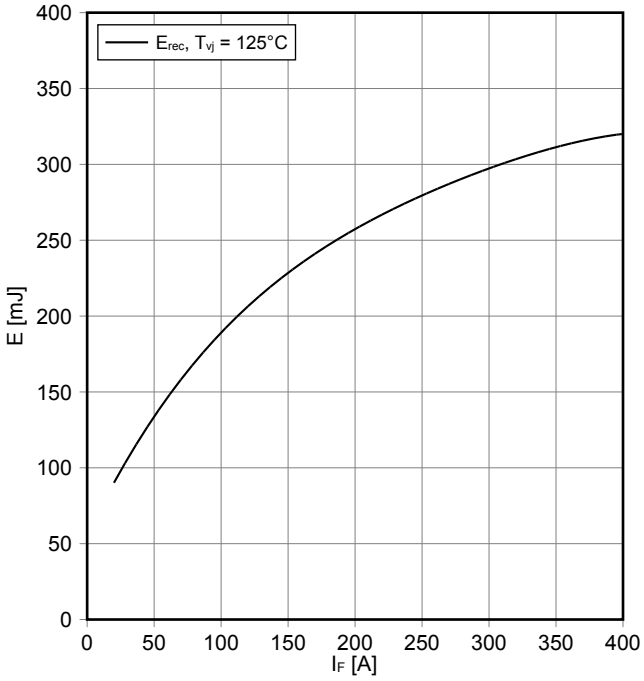
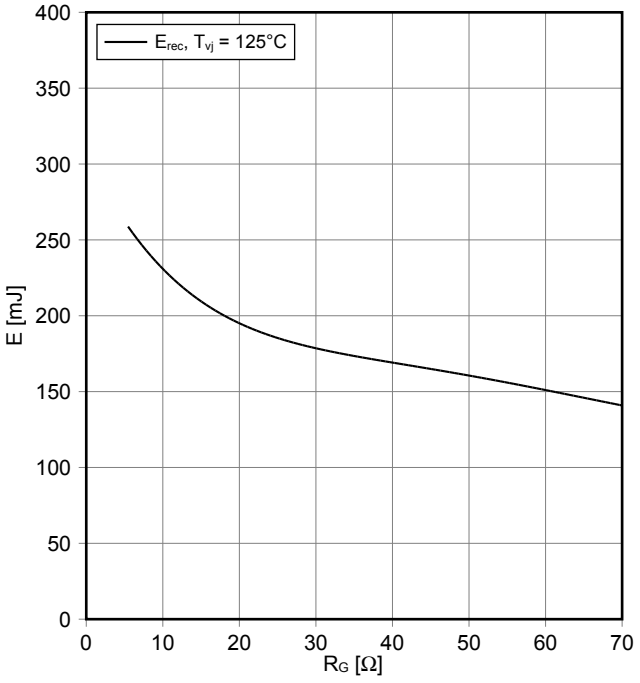
正向偏压特性 二极管,逆变器 (典型)
forward characteristic of Diode, Inverter (typical)
$I_F = f(V_F)$



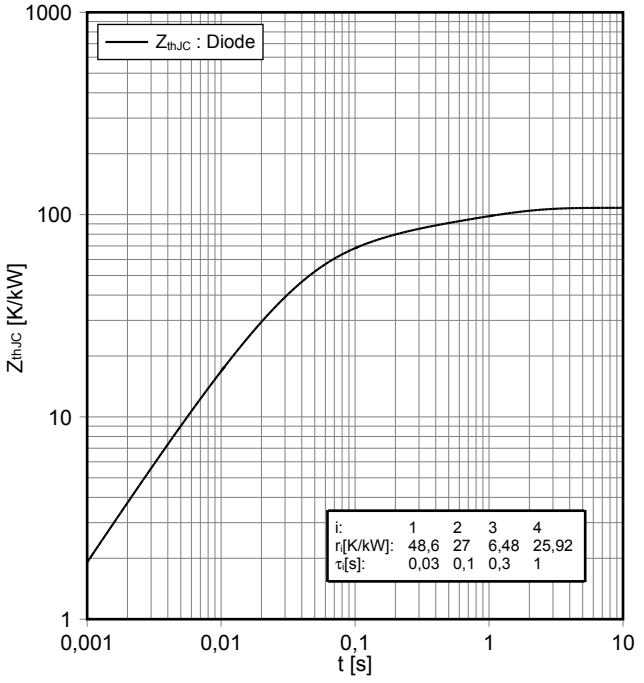
开关损耗 二极管,逆变器 (典型)
switching losses Diode, Inverter (typical)
$E_{rec} = f(I_F)$
R_{Gon} = Ω, V_{CE} = 1800 V



开关损耗 二极管,逆变器 (典型)
switching losses Diode, Inverter (typical)
$E_{rec} = f(R_G)$
I_F = 200 A, V_{CE} = 1800 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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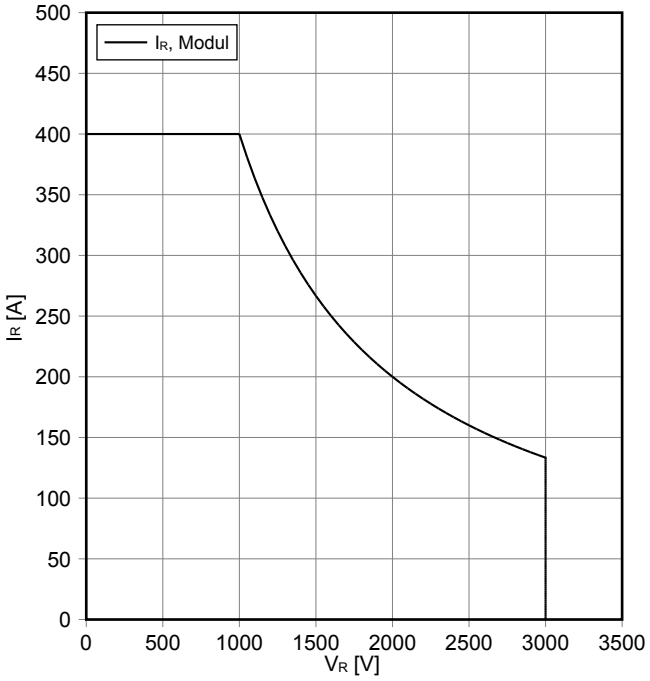
安全工作区 二极管,逆变器 (SOA)
safe operation area Diode, Inverter (SOA)
$I_R = f(V_R)$
$T_{vj} = 125°C$



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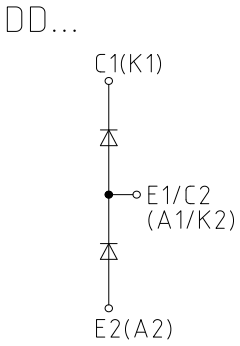
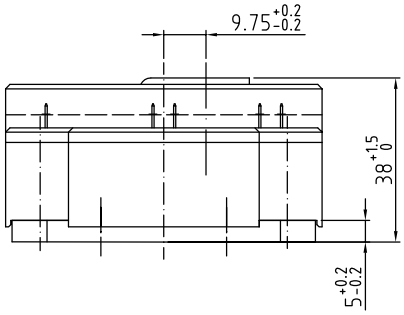
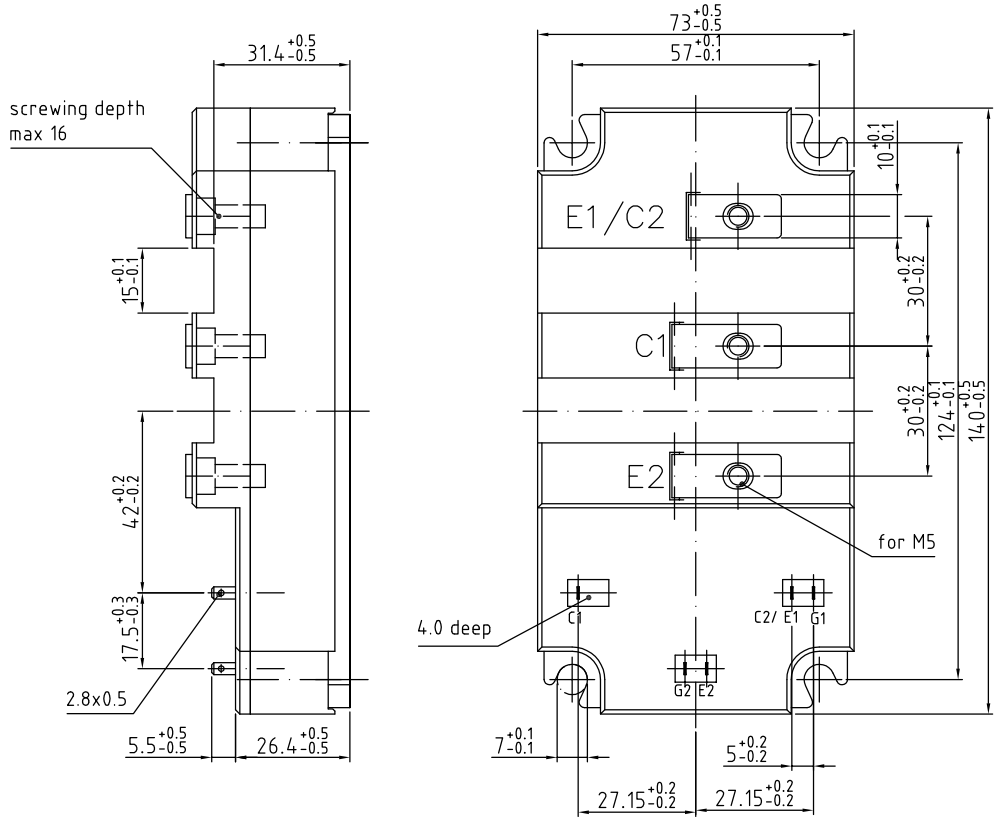
接线图 / Circuit diagram



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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-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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Should you require product information in excess of the data given in this product data sheet or which concerns the specific application of our product, please contact the sales office, which is responsible for you (see www.infineon.com). For those that are specifically interested we may provide application notes.

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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.

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