

英飞凌碳化硅 MOSFET

英飞凌CoolSiC™ MOSFET 750 V G2

750 V CoolSiC™ MOSFET 采用英飞凌强大的第 2 代碳化硅沟槽技术，提供无与伦比的性能、卓越的可靠性和极佳的易用性。它能够实现经济高效且简化的设计，满足不断增长的系统和市场需求。

特性

- 高度稳健的 750 V 技术，100% 经过雪崩测试
- 同类最佳的 $R_{DS(on)} \times Q_{fr}$
- 出色的 $R_{DS(on)} \times Q_{oss}$ 和 $R_{DS(on)} \times Q_G$
- 低 C_{rss}/C_{iss} 和高 $V_{GS(th)}$ 的独特组合
- 英飞凌专有芯片贴装技术
- 驱动器源引脚可用

优点

- 增强了 500 V 以上总线电压的稳健性和可靠性
- 硬开关效率卓越
- 软开关拓扑中的开关频率更高
- 单极栅极驱动的抗寄生导通稳健性
- 一流的散热性能
- 通过改进栅极控制减少开关损耗

潜在应用

- 电动汽车充电基础设施
- 太阳能光伏逆变器和不间断电源
- 储能和电池化成
- 通信和服务器 SMPS
- 固态继电器和断路器

产品验证

通过 JEDEC 相关测试。

请注意：源引脚和驱动器源引脚不可互换。交换可能会导致故障。对于并联 MOSFET 器件，通常建议将栅极电阻串联在驱动源而非栅极上。

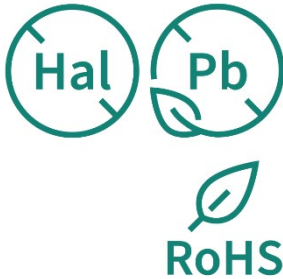
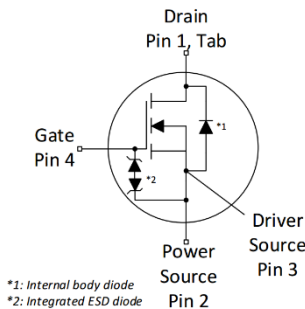
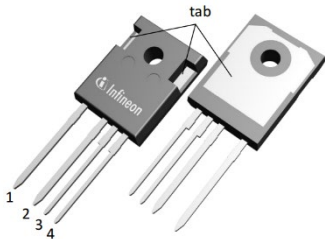
表 1 主要性能参数

Parameter	Value	Unit
V_{DSS} over full $T_{j,range}$	750	V
$R_{DS(on),typ}$	60	mΩ
$R_{DS(on),max}$	78	mΩ
$Q_{G,typ}$	20	nC
$I_{D,pulse}$	94	A
$Q_{oss,typ}$ @ 500 V	42	nC
$E_{oss,typ}$ @ 500 V	7.5	μJ

Part number	Package	Marking	Related links
IMZA75R060M2H	PG-TO247-4	75R060M2	see Appendix A

本数据手册的原文使用英文撰写。为方便起见，英飞凌提供了译文；由于翻译过程中可能使用了自动化工具，英飞凌不保证译文的准确性。为确认准确性，请务必访问 [infineon.com](https://www.infineon.com) 参考最新的英文版本（控制文档）。

PG-TO247-4



目录

描述.....	1
最大额定值	3
热特性.....	4
工作范围	5
电气特性	6
电气特性图.....	8
测试电路	14
封装外形	15
附录 A	17
修订记录	18
商标.....	19
免责声明.....	19

1 最大额定值

除非另有规定， $T_j = 25^\circ\text{C}$ 。

注：为了获得最佳的使用寿命和可靠性，英飞凌建议运行条件不超过本数据手册中所述最大额定值的80%。不建议采用“线性模式”运行。如需评估潜在的“线性模式”运行，请联系英飞凌销售办事处。

表 2 最大额定值

Parameter	Symbol	Values			Unit	Note / Test condition
		Min.	Typ.	Max.		
Drain-source voltage	V_{DS}	-	-	750	V	static, $T_j = -55^\circ\text{C}$ to 175°C
Continuous DC drain current ¹⁾	I_{DDC}	-	-	28	A	$T_c = 25^\circ\text{C}$
				20		$T_c = 100^\circ\text{C}$
Peak drain current ²⁾	I_{DM}	-	-	94	A	$T_c = 25^\circ\text{C}$, $V_{\text{GS}} = 18\text{ V}$
Avalanche energy, single pulse	E_{AS}	-	-	86	mJ	$I_D = 3.2\text{ A}$, $V_{\text{DD}} = 50\text{ V}$; see table 11
Avalanche energy, repetitive	E_{AR}			0.43		
Avalanche current, single pulse	I_{AS}	-	-	3.2	A	-
MOSFET dv/dt ruggedness	dv/dt	-	-	200	V/ns	$V_{\text{DS}} = 0 \dots 500\text{ V}$
Gate source voltage (static) ³⁾	V_{GS}	-7	-	23	V	-
Gate source voltage (transient)	V_{GS}	-11	-	25	V	$t_p \leq 500\text{ ns}$, duty cycle $\leq 1\%$
Power dissipation	P_{tot}	-	-	108	W	$T_c = 25^\circ\text{C}$
Storage temperature	T_{stg}	-55	-	150	$^\circ\text{C}$	-
Operating junction temperature	T_j			175		
Extended operating junction temperature ⁴⁾	T_j	-	-	200	$^\circ\text{C}$	$\leq 100\text{ h}$ in the application lifetime
Mounting torque	-	-	-	60	Ncm	M3 and M3.5 screws
Continuous reverse drain current ¹⁾	I_{SDC}	-	-	28	A	$V_{\text{GS}} = 18\text{ V}$, $T_c = 25^\circ\text{C}$
				21		$V_{\text{GS}} = 0\text{ V}$, $T_c = 25^\circ\text{C}$
Peak reverse drain current ²⁾	I_{SM}	-	-	94	A	$T_c = 25^\circ\text{C}$, $t_p \leq 250\text{ ns}$
				26		$T_c = 25^\circ\text{C}$
Insulation withstand voltage	V_{ISO}	-	-	n.a.	V	V_{rms} , $T_c = 25^\circ\text{C}$, $t = 1\text{ min}$

1) 受 $T_{j,\text{max}}$ 限制。

2) 脉冲宽度 t_{pulse} 受 $T_{j,\text{max}}$ 限制。

3) 应用设计中的最大栅极源电压应符合 IPC-9592B 的规定。

4) 温度循环次数高达 7500 次，其中最大 ΔT 限制为 100K。

2 热特性

表 3 热特性

Parameter	Symbol	Values			Unit	Note / Test condition
		Min.	Typ.	Max.		
Thermal resistance, junction - case	$R_{th(j-c)}$	-	0.99	1.39	°C/W	Not subject to production test. Parameter verified by design/characterization according to JESD51-14.
Soldering temperature, wave soldering only allowed at leads	T_{sold}	-	-	260	°C	1.6mm (0.063in.) from case for 10s

3 工作范围

表 4 工作范围

Parameter	Symbol	Values			Unit	Note / Test condition
		Min.	Typ.	Max.		
Recommended turn-on voltage	$V_{GS(on)}$	-	18	-	V	-
Recommended turn-off voltage	$V_{GS(off)}$		0			

4 电气特性

除非另有规定, $T_j = 25^\circ\text{C}$

表 5 静态特性

Parameter	Symbol	Values			Unit	Note / Test condition
		Min.	Typ.	Max.		
Drain-source breakdown voltage ⁵⁾	$V_{(BR)DSS}$	840	-	-	V	$V_{GS} = 0\text{ V}, I_D = 0.30\text{ mA}$
Gate threshold voltage ⁶⁾	$V_{GS(th)}$	3.5	4.5	5.6	V	$V_{DS} = V_{GS}, I_D = 3.0\text{ mA}, T_j = 25^\circ\text{C}$
		-	3.3	-		$V_{DS} = V_{GS}, I_D = 3.0\text{ mA}, T_j = 175^\circ\text{C}$
Zero gate voltage drain current	I_{DSS}	-	1	75	μA	$V_{DS} = 750\text{ V}, V_{GS} = 0\text{ V}, T_j = 25^\circ\text{C}$
			10	-		$V_{DS} = 750\text{ V}, V_{GS} = 0\text{ V}, T_j = 175^\circ\text{C}$
Gate-source leakage current	I_{GSS}	-	-	1	μA	$V_{GS} = 23\text{ V}, V_{DS} = 0\text{ V}, T_j = 25^\circ\text{C}$
				-1		$V_{GS} = -7\text{ V}, V_{DS} = 0\text{ V}, T_j = 25^\circ\text{C}$
Forward transconductance	g_{fs}	-	8.3	-	S	$I_D = 13.8\text{ A}, V_{DS} = 20\text{ V}$
Drain-source on-state resistance	$R_{DS(on)}$	-	81.0	-	$\text{m}\Omega$	$V_{GS} = 15\text{ V}, I_D = 13.8\text{ A}, T_j = 25^\circ\text{C}$
			60.0	78.0		$V_{GS} = 18\text{ V}, I_D = 13.8\text{ A}, T_j = 25^\circ\text{C}$
			56.0	-		$V_{GS} = 20\text{ V}, I_D = 13.8\text{ A}, T_j = 25^\circ\text{C}$
Drain-source on-state resistance ⁷⁾	$R_{DS(on)}$	-	95.0	124.0	$\text{m}\Omega$	$V_{GS} = 18\text{ V}, I_D = 13.8\text{ A}, T_j = 150^\circ\text{C}$
Drain-source on-state resistance	$R_{DS(on)}$	-	108.0	-	$\text{m}\Omega$	$V_{GS} = 18\text{ V}, I_D = 13.8\text{ A}, T_j = 175^\circ\text{C}$
Internal gate resistance	$R_{G,int}$	-	4.5	-	Ω	$f = 1\text{ MHz}$

5) 作为异常运行条件下的稳健性测量, 不建议用于正常运行。

6) 在 $V_{GS} = +20\text{ V}$ 条件下, 经过预处理脉冲后测试。不建议采用“线性模式”运行。如需评估潜在的“线性模式”运行, 请联系英飞凌销售办事处。

7) 由设计指定, 未经过生产测试。

表 6 动态特性

外部寄生元件 (PCB 布局) 对开关行为有显著影响。

必须尽量减少杂散电感和耦合电容。

如需布局建议, 请使用提供的应用笔记或联系英飞凌销售办事处。

Parameter	Symbol	Values			Unit	Note / Test condition
		Min.	Typ.	Max.		
Input capacitance	C_{iss}	-	716	-	pF	$V_{GS} = 0\text{ V}, V_{DS} = 500\text{ V}, f = 250\text{ kHz}$
Reverse transfer capacitance	C_{rss}		3.6	-		
Output capacitance ⁸⁾	C_{oss}		49	64		
Output charge ⁸⁾	Q_{oss}	-	42	55	nC	calculation based on C_{oss}
Effective output capacitance, energy related ⁹⁾	$C_{o(er)}$	-	60	-	pF	$V_{GS} = 0\text{ V},$ $V_{DS} = 0 \dots 500\text{ V}$
Effective output capacitance, time related ¹⁰⁾	$C_{o(tr)}$	-	84	-	pF	$I_D = \text{constant}, V_{GS} = 0\text{ V},$ $V_{DS} = 0 \dots 500\text{ V}$

表 6 动态特性

外部寄生元件（PCB 布局）对开关行为有显著影响。

必须尽量减少杂散电感和耦合电容。

如需布局建议，请使用提供的应用笔记或联系英飞凌销售办事处。

Parameter	Symbol	Values			Unit	Note / Test condition
		Min.	Typ.	Max.		
Turn-on delay time	$t_{d(on)}$	-	7	-	ns	$V_{DD} = 500\text{ V}$, $V_{GS} = 0/18\text{ V}$, $I_D = 13.8\text{ A}$, $R_{G,ext} = 1.8\text{ }\Omega$, $L_{stray} = 15\text{ nH}$; see table 10
Rise time	t_r		6		ns	
Turn-off delay time	$t_{d(off)}$		13		ns	
Fall time	t_f		6		ns	
Turn-ON switching losses ¹¹⁾	E_{on}		32		μJ	
Turn-OFF switching losses ¹¹⁾	E_{off}		13		μJ	
Total switching losses ¹¹⁾	E_{tot}		45		μJ	

8) 最大规格由计算出的六西格玛置信上限定义。

9) $C_{o(er)}$ 是一个固定电容，当 V_{DS} 从 0 上升至 500 V 时，其存储能量与 C_{oss} 相同

10) $C_{o(tr)}$ 是一个固定电容，当 V_{DS} 从 0 上升至 500 V 时，其充电时间与 C_{oss} 相同

11) MOSFET 采用半桥配置，无外部二极管。根据 IEC 60747-8 标准，通过特性验证参数。

表 7 栅极电荷特性

Parameter	Symbol	Values			Unit	Note / Test condition
		Min.	Typ.	Max.		
Plateau gate to source charge	$Q_{GS(pl)}$	-	5.1	-	nC	$V_{DD} = 500\text{ V}$, $I_D = 13.8\text{ A}$, $V_{GS} = 0\text{ to }18\text{ V}$
Gate to drain charge	Q_{GD}		4.1			
Total gate charge	Q_G		20			

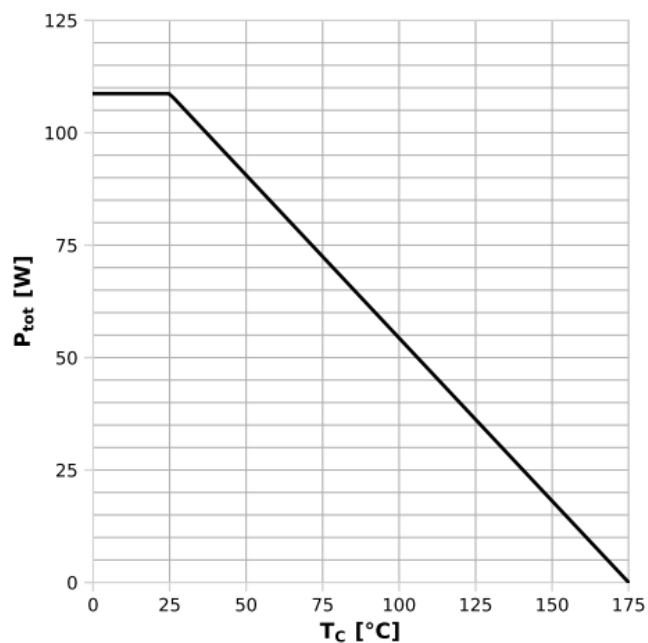
表 8 反向二极管特性

Parameter	Symbol	Values			Unit	Note / Test condition
		Min.	Typ.	Max.		
Drain-source reverse voltage	V_{SD}	-	4.1	5.0	V	$V_{GS} = 0\text{ V}$, $I_S = 13.8\text{ A}$, $T_j = 25^\circ\text{C}$
			3.8	-		$V_{GS} = 0\text{ V}$, $I_S = 13.8\text{ A}$, $T_j = 175^\circ\text{C}$
MOSFET forward recovery time	t_{fr}	-	5.4	-	ns	$V_{DD} = 500\text{ V}$, $I_S = 13.8\text{ A}$, $di_S/dt = 4000\text{ A}/\mu\text{s}$; see table 9
MOSFET forward recovery charge ¹²⁾	Q_{fr}		44		nC	
MOSFET peak forward recovery current	I_{frm}		16		A	

12) Q_{fr} 包括 Q_{oss}

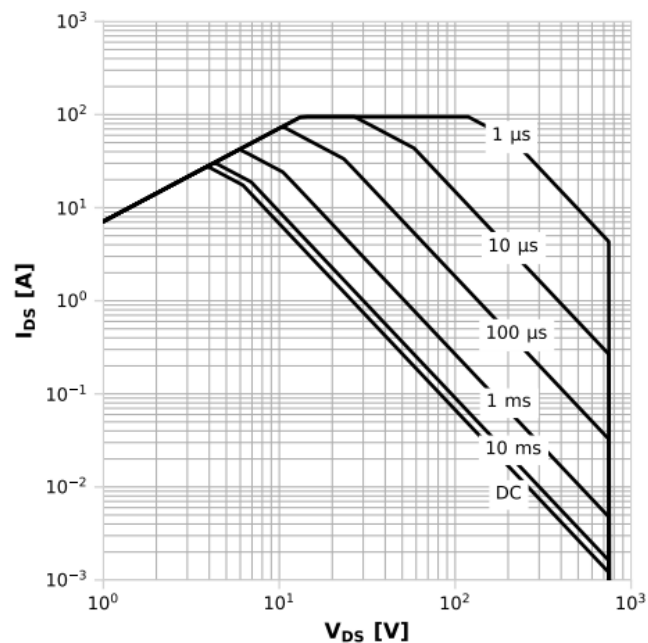
5 电气特性图

Diagram 1: Power dissipation



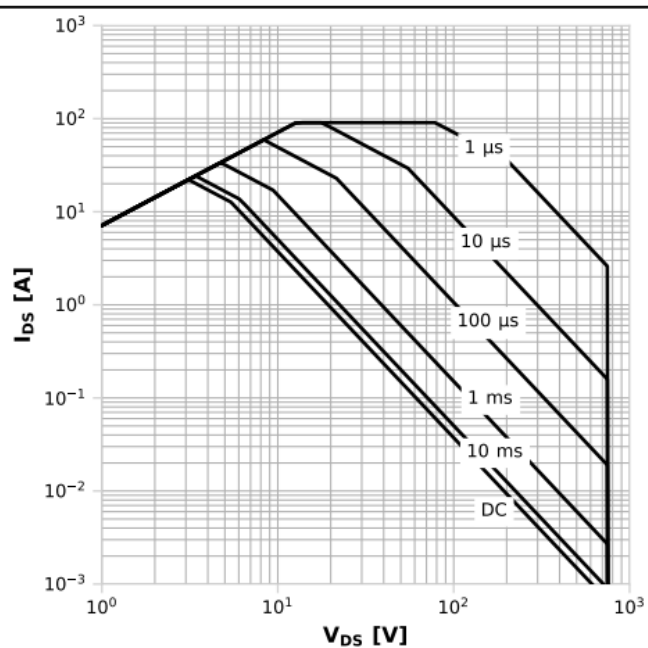
$$P_{\text{tot}} = f(T_c)$$

Diagram 2: Safe operating area



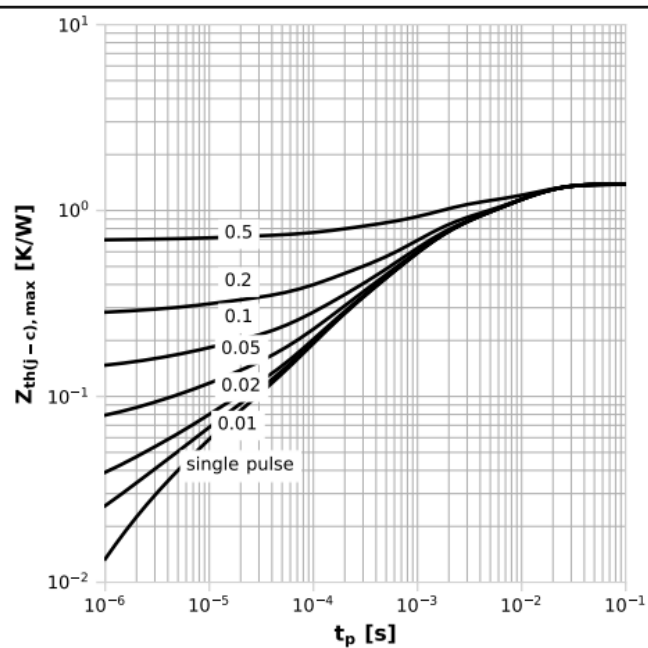
$$I_{DS} = f(V_{DS}); T_c = 25^\circ\text{C}; D = 0; \text{parameter: } t_p$$

Diagram 3: Safe operating area



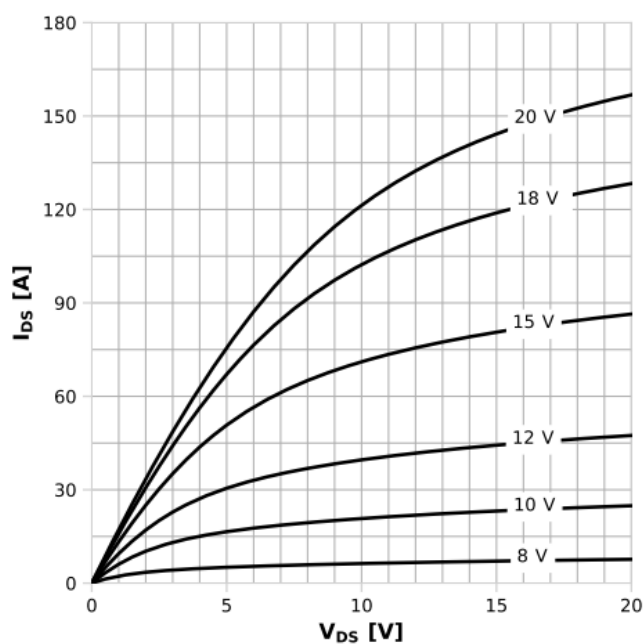
$$I_{DS} = f(V_{DS}); T_c = 80^\circ\text{C}; D = 0; \text{parameter: } t_p$$

Diagram 4: Max. transient thermal impedance



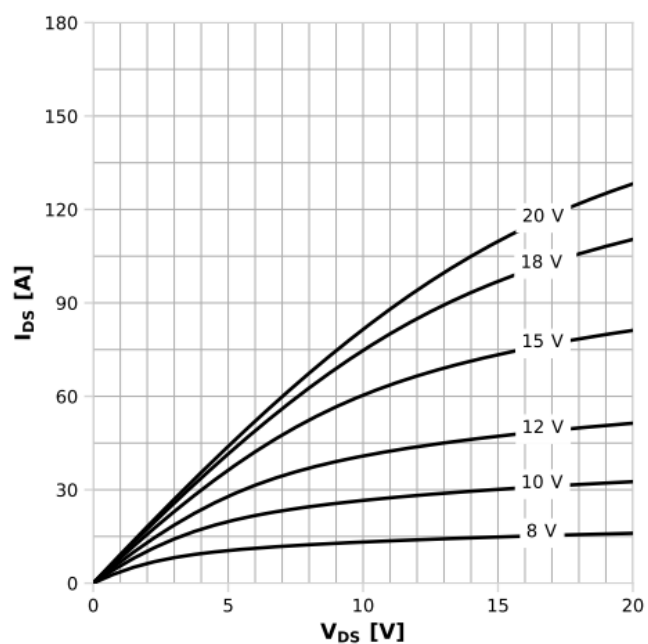
$$Z_{th(j-c),\text{max}} = f(t_p); \text{parameter: } D = t_p/T$$

Diagram 5: Typ. output characteristics



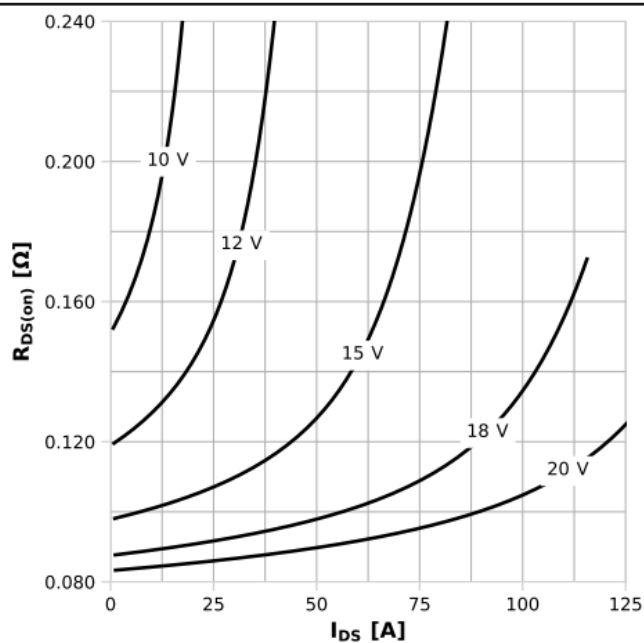
$I_{DS}=f(V_{DS})$; $T_J=25^{\circ}\text{C}$; parameter: V_{GS}

Diagram 6: Typ. output characteristics



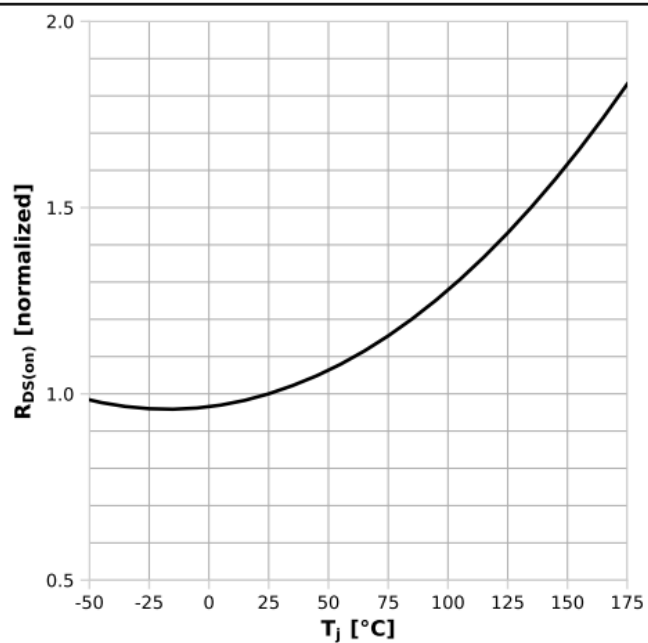
$I_{DS}=f(V_{DS})$; $T_J=175^{\circ}\text{C}$; parameter: V_{GS}

Diagram 7: Typ. drain-source on-state resistance



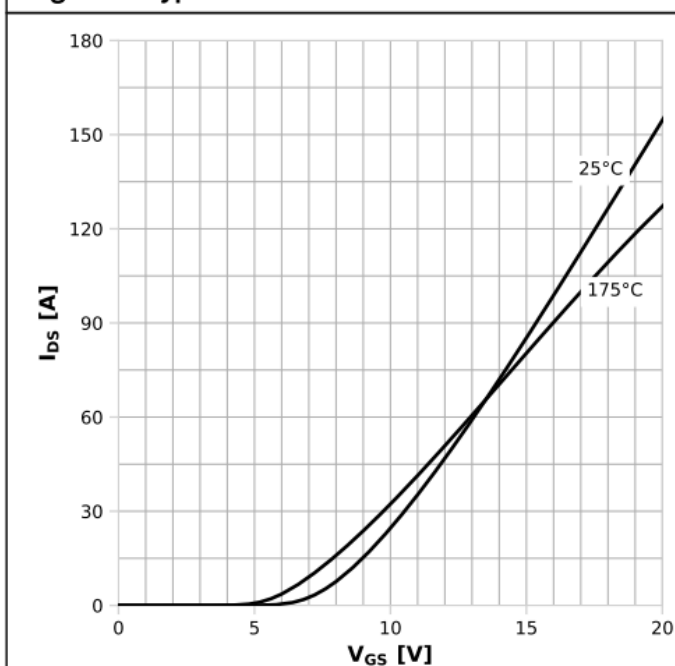
$R_{DS(on)}=f(I_{DS})$; $T_J=125^{\circ}\text{C}$; parameter: V_{GS}

Diagram 8: Drain-source on-state resistance



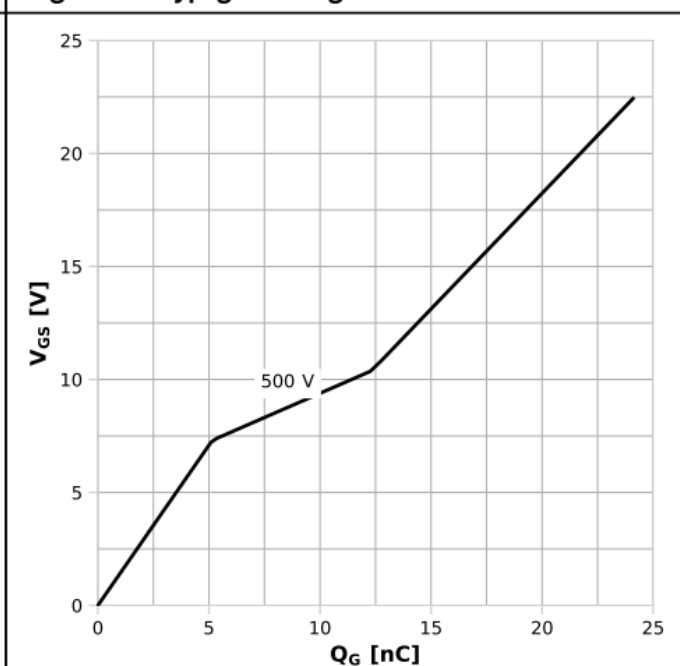
$R_{DS(on)}=f(T_J)$; $I_D=13.8\text{ A}$; $V_{GS}=18\text{ V}$

Diagram 9: Typ. transfer characteristics



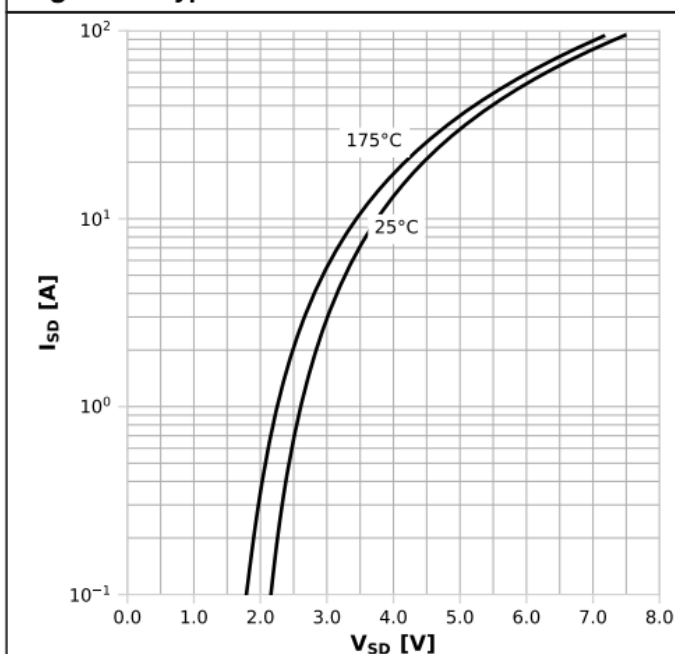
$I_{DS}=f(V_{GS})$; $V_{DS}=20$ V; parameter: T_j

Diagram 10: Typ. gate charge



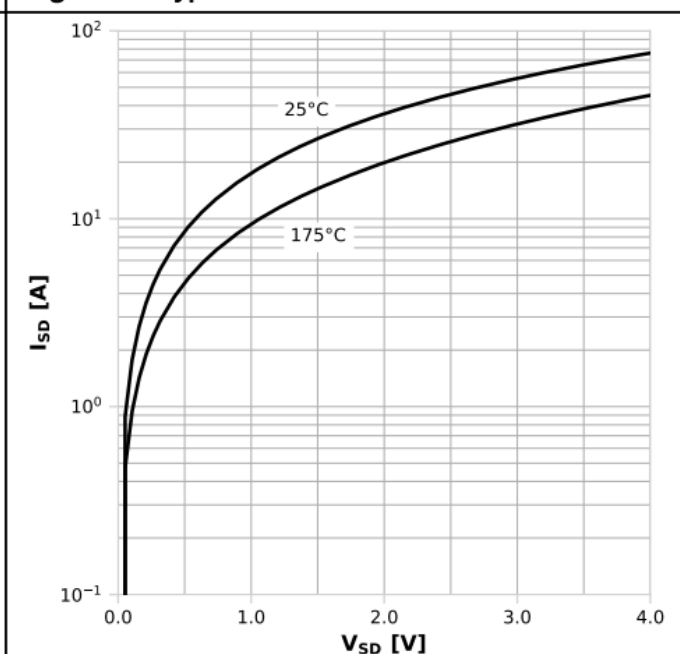
$V_{GS}=f(Q_G)$; $I_D=13.8$ A pulsed; parameter: V_{DD}

Diagram 11: Typ. reverse drain current characteristics



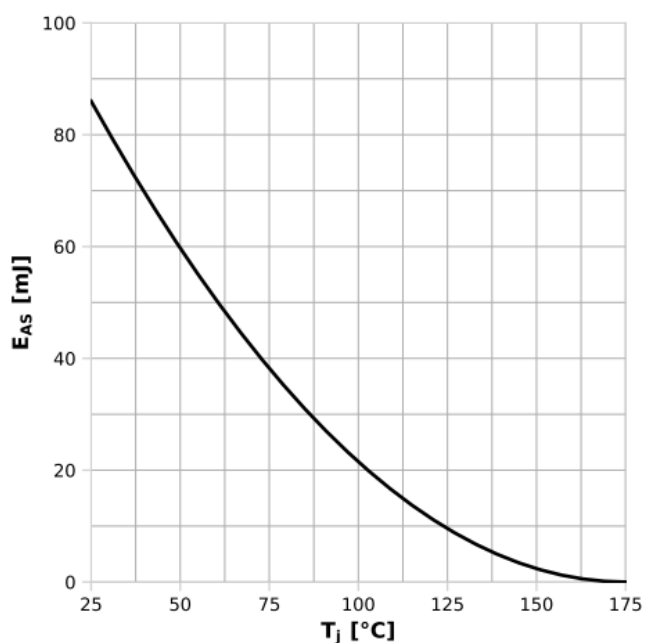
$I_{SD}=f(V_{SD})$; $V_{GS}=0$ V; parameter: T_j

Diagram 12: Typ. reverse drain current characteristics



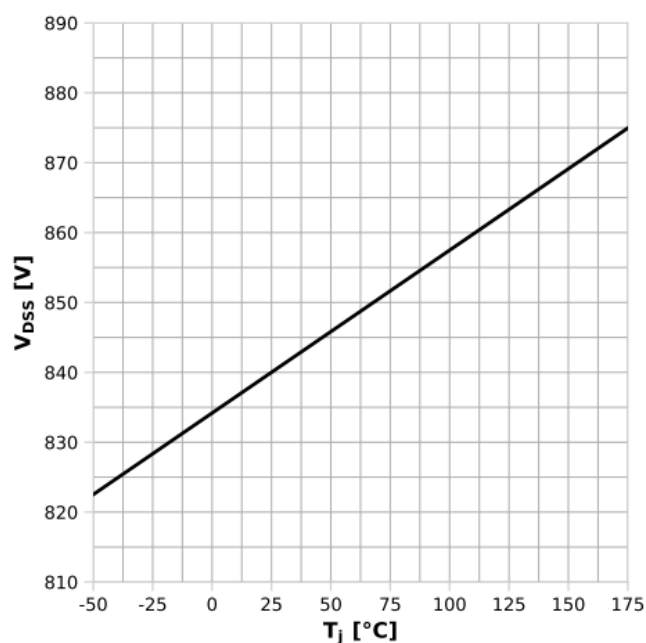
$I_{SD}=f(V_{SD})$; $V_{GS}=18$ V; parameter: T_j

Diagram 13: Avalanche energy



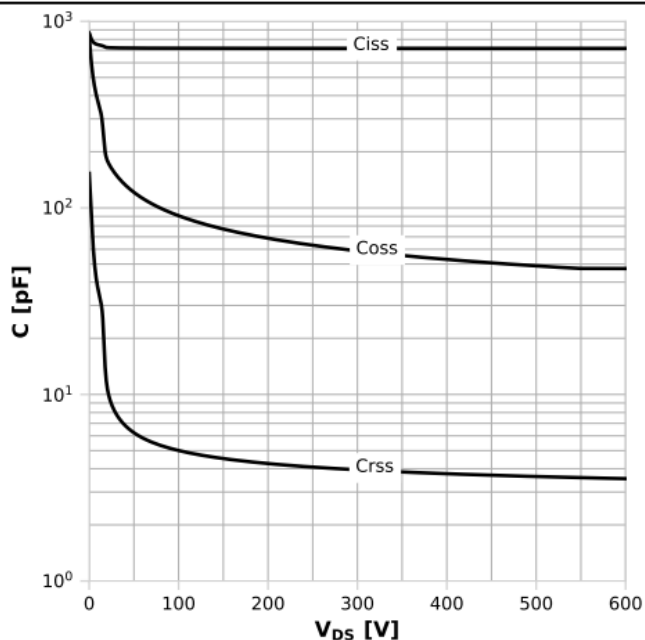
$$E_{AS}=f(T_J); I_D=3.2\text{ A}; V_{DD}=50\text{ V}$$

Diagram 14: Drain-source breakdown voltage



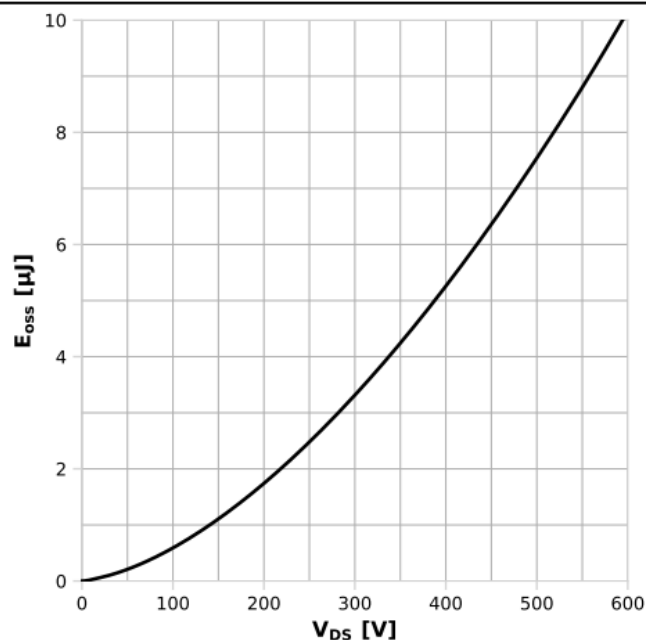
$$V_{DSS}=f(T_J); I_D=0.3\text{ mA}$$

Diagram 15: Typ. capacitances



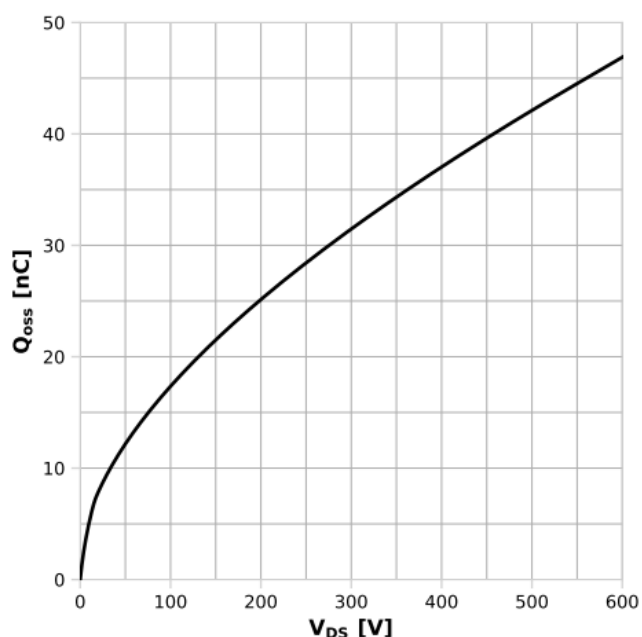
$$C=f(V_{DS}); V_{GS}=0\text{ V}; f=250\text{ kHz}$$

Diagram 16: Typ. Coss stored energy



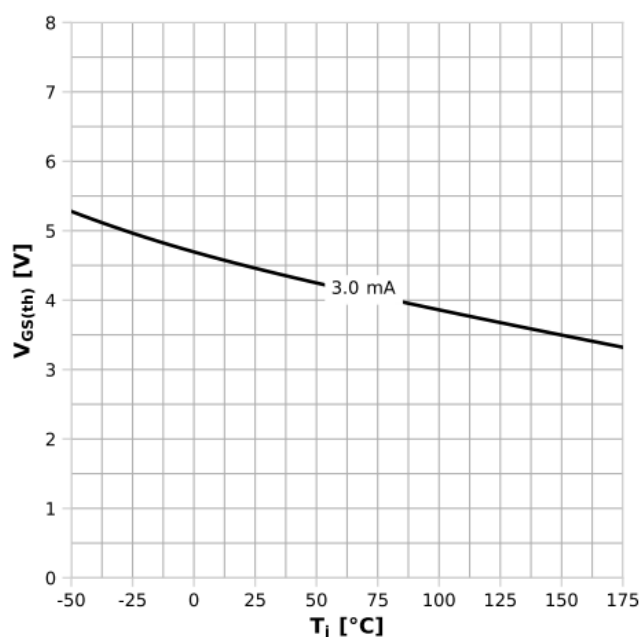
$$E_{oss}=f(V_{DS})$$

Diagram 17: Typ. Qoss output charge



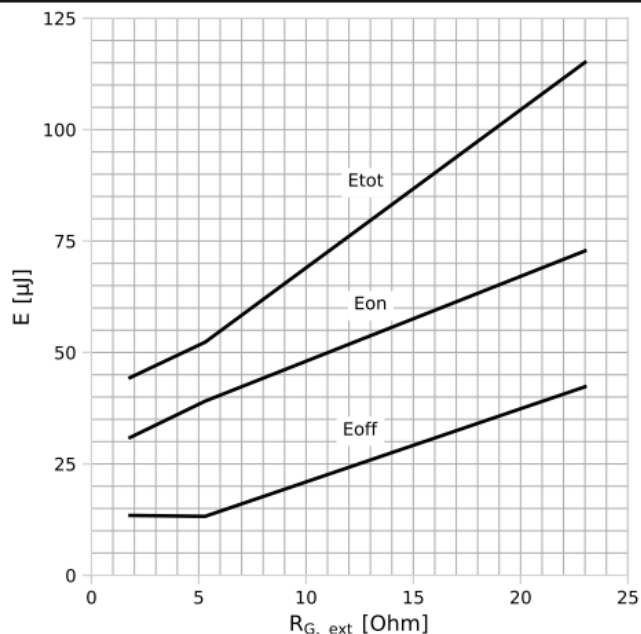
$$Q_{oss}=f(V_{DS})$$

Diagram 18: Typ. gate threshold voltage



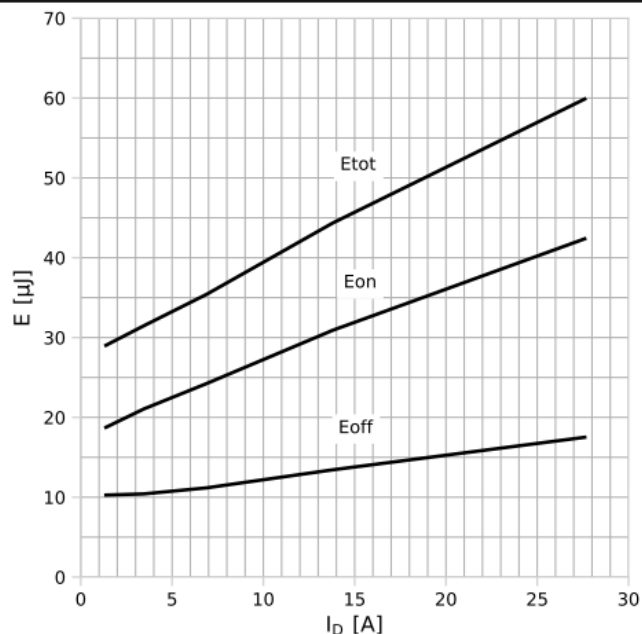
$$V_{GS(th)}=f(T_J), V_{GS}=V_{DS}; \text{ parameter: } I_D$$

Diagram 19: Typ. Switching Losses vs $R_{G,ext}$

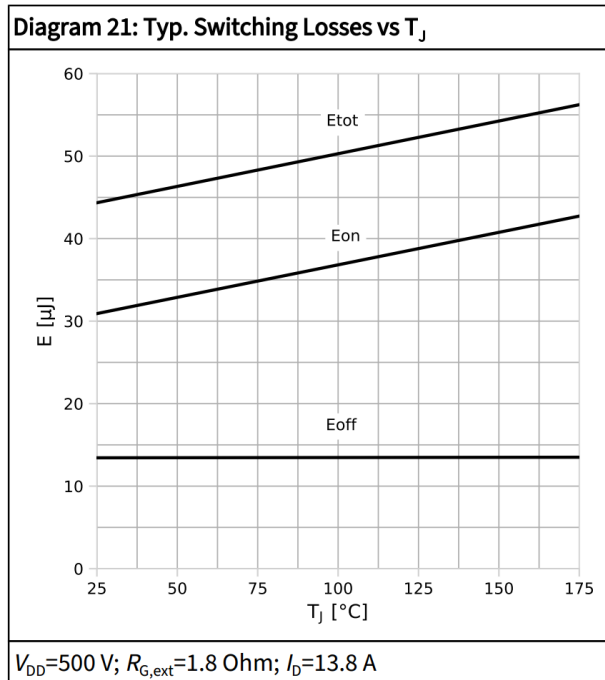


$$V_{DD}=500 \text{ V}; I_D=13.8 \text{ A}; T_J=25^\circ\text{C}$$

Diagram 20: Typ. Switching Losses vs switching current



$$V_{DD}=500 \text{ V}; R_{G,ext}=1.8 \text{ Ohm}; T_J=25^\circ\text{C}$$



6 测试电路

表 9 体二极管特性

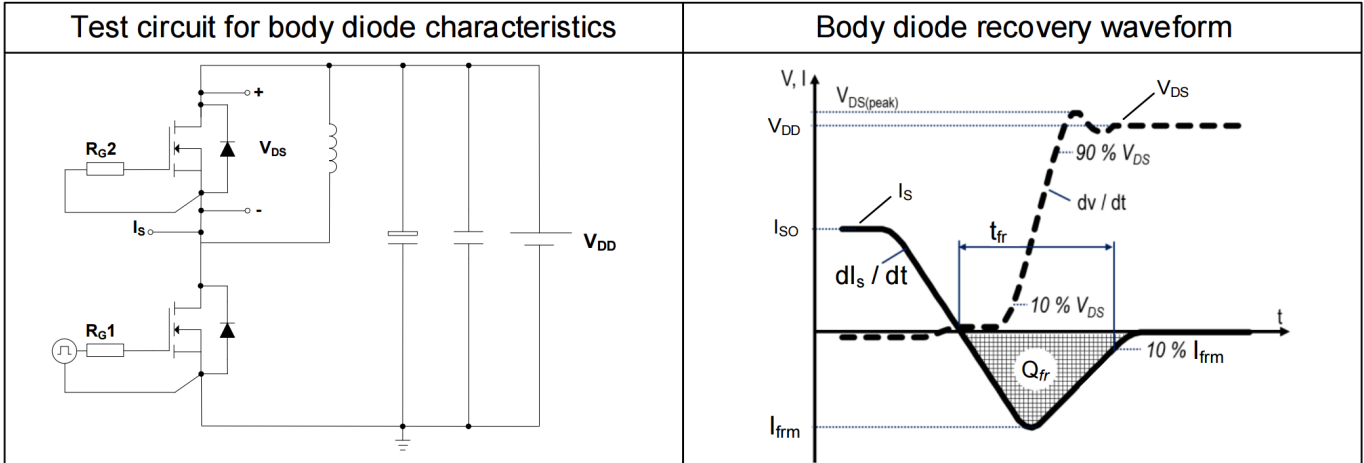


表 10 开关时间

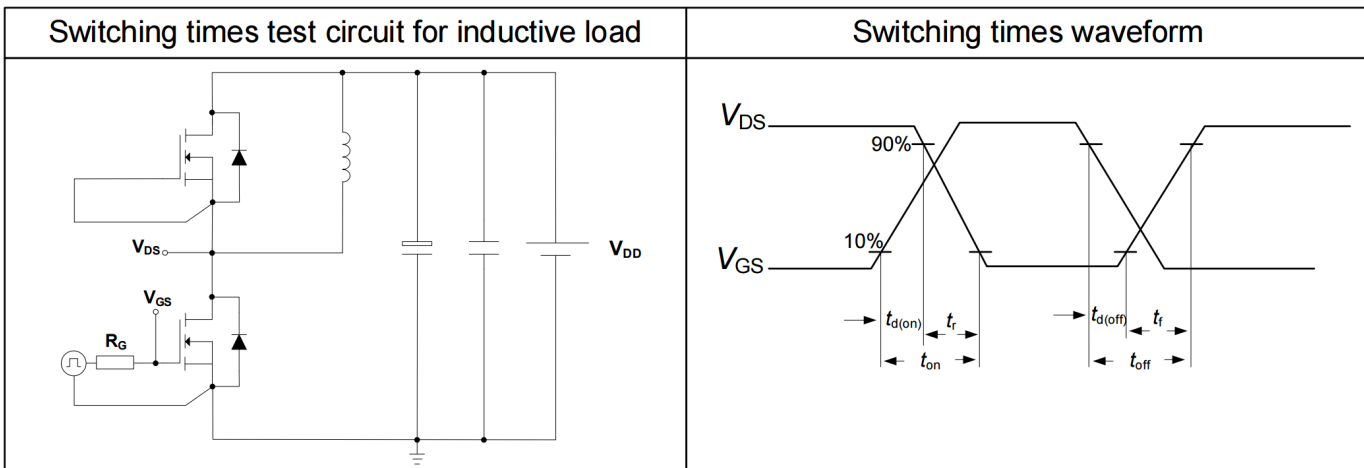
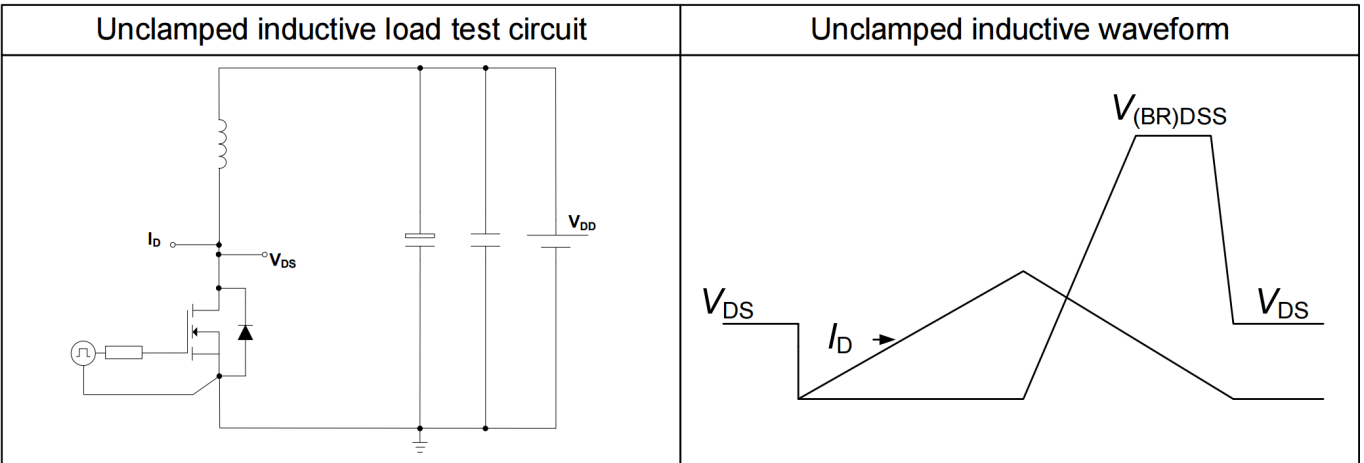
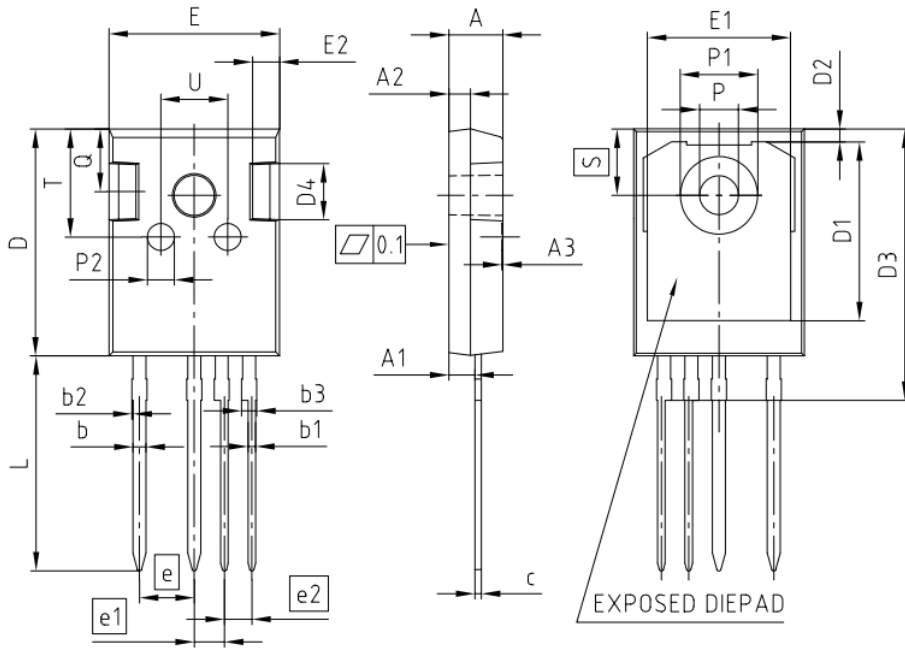


表 11 非钳位感性负载



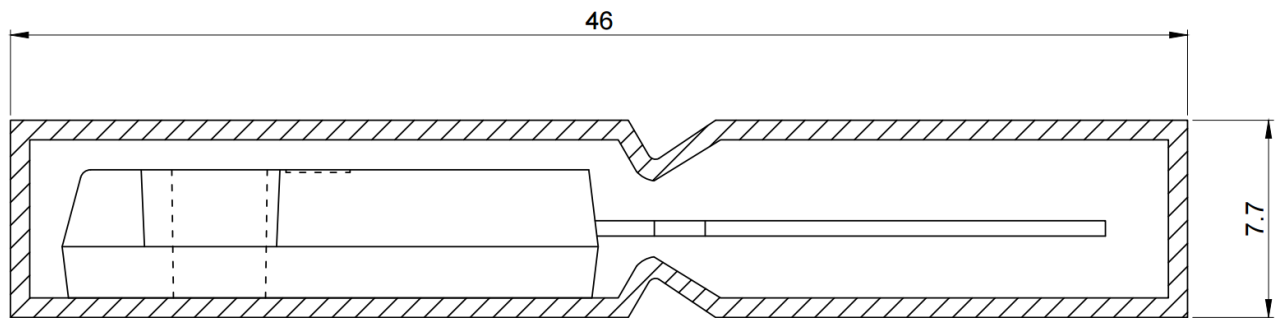
7 封装外形



NOTES:
DIMENSIONS DO NOT INCLUDE MOLD FLASH, PROTRUSION OR GATE BURRS

PACKAGE - GROUP NUMBER: PG-TO247-4-U02					
DIMENSIONS	MILLIMETERS		DIMENSIONS	MILLIMETERS	
	MIN.	MAX.		MIN.	MAX.
A	4.90	5.10	E	15.70	15.90
A1	2.31	2.51	E1	13.10	13.50
A2	1.90	2.10	E2	2.40	2.60
A3	0.05	0.25	e	5.08	
b	1.10	1.30	e1	2.79	
b1	0.65	0.79	e2	2.54	
b2	---	0.20	N	4	
b3	1.34	1.44	L	19.80	20.10
c	0.58	0.66	øP	3.50	3.70
D	20.90	21.10	øP1	7.40	
D1	16.25	16.85	øP2	2.40	2.60
D2	1.05	1.35	Q	5.60	6.00
D3	24.97	25.27	S	6.15	
D4	4.90	5.10	T	9.80	10.20
			U	6.00	6.40

图 1 PG-TO 247 - 4 外形图，尺寸单位为毫米



All dimensions are in units mm
The drawing is in compliance with ISO 128-30, Projection Method 1 []

图 2 PG- TO 247 - 4 包装型号，尺寸单位为毫米

8 附录 A

表 12 相关链接

- [IFX CoolSiC CoolSiC™ MOSFET 750 V G2 网页](#)
- [IFX CoolSiC CoolSiC™ MOSFET 750 V G2 网页](#)
- [IFX CoolSiC CoolSiC™ MOSFET 750 V G2 仿真模型](#)
- [IFX 设计工具](#)

修订记录

IMZA75R060M2H

Revision 2025-12-19, Rev. 1.0

Previous revisions

Revision	Date	Subjects (major changes since last revision)
1.0	2025-12-19	Release of final version

Trademarks

All referenced product or service names and trademarks are the property of their respective owners.

Published by Infineon Technologies AG, Am Campeon 1-15, 85579 Neubiberg, Germany

Copyright (c) 2025 Infineon Technologies AG and its affiliates. All Rights Reserved.

Important notice

Products which may also include samples and may be comprised of hardware or software or both ("Product(s)") are sold or provided and delivered by Infineon Technologies AG and its affiliates ("Infineon") subject to the terms and conditions of the frame supply contract or other written agreement(s) executed by a customer and Infineon or, in the absence of the foregoing, the applicable Sales Conditions of Infineon. General terms and conditions of a customer or deviations from applicable Sales Conditions of Infineon shall only be binding for Infineon if and to the extent Infineon has given its express written consent.

For the avoidance of doubt, Infineon disclaims all warranties of non-infringement of third-party rights and implied warranties such as warranties of fitness for a specific use/purpose or merchantability.

Infineon shall not be responsible for any information with respect to samples, the application or customer's specific use of any Product or for any examples or typical values given in this document.

The data contained in this document is exclusively intended for technically qualified and skilled customer representatives. It is the responsibility of the customer to evaluate the suitability of the Product for the intended application and the customer's specific use and to verify all relevant technical data contained in this document in the intended application and the customer's specific use. The customer is responsible for properly designing, programming, and testing the functionality and safety of the intended application, as well as complying with any legal requirements related to its use.

Unless otherwise explicitly approved by Infineon, Products may not be used in any application where a failure of the Products or any consequences of the use thereof can reasonably be expected to result in personal injury. However, the foregoing shall not prevent the customer from using any Product in such fields of use that Infineon has explicitly designed and sold it for, provided that the overall responsibility for the application lies with the customer.

Infineon expressly reserves the right to use its content for commercial text and data mining (TDM) according to applicable laws, e.g. Section 44b of the German Copyright Act (UrhG).

If the Product includes security features: Because no computing device can be absolutely secure, and despite security measures implemented in the Product, Infineon does not guarantee that the Product will be free from intrusion, data theft or loss, or other breaches ("Security Breaches"), and Infineon shall have no liability arising out of any Security Breaches.

If this document includes or references software:

The software is owned by Infineon under the intellectual property laws and treaties of the United States, Germany, and other countries worldwide. All rights reserved. Therefore, you may use the software only as provided in the software license agreement accompanying the software. If no software license agreement applies, Infineon hereby grants you a personal, non-exclusive, non-transferable license (without the right to sublicense) under its intellectual property rights in the software (a) for software provided in source code form, to modify and reproduce the software solely for use with Infineon hardware products, only internally within your organization, and (b) to distribute the software in binary code form externally to end users, solely for use on Infineon hardware products. Any other use, reproduction, modification, translation, or compilation of the software is prohibited.

For further information on the Product, technology, delivery terms and conditions, and prices, please contact your nearest Infineon office or visit <https://www.infineon.com>.



免责声明

请注意，本文件的原文使用英文撰写，为方便客户浏览英飞凌提供了中文译文。该中文译文仅供参考，并不可作为任何论点之依据。

由于翻译过程中可能使用了自动化程序，以及语言翻译和转换过程中的差异，最后的中文译文与最新的英文版本原文含义可能存在不尽相同之处。

因此，我们同时提供该中文译文版本的最新英文原文供您阅读，请参见 <http://www.infineon.com>

英文原文和中文译文版本之间若存有任何歧异，以最新的英文版本为准，并且仅认可英文版本为正式文件。

您如果使用本文件，即表示您同意并理解上述说明。英飞凌不对因翻译过程中可能存在的任何不完整或不准确信息而产生的任何直接或间接损失或损害负责。英飞凌不承担中文译文版本的完整性和准确性责任。如果您不同意上述说明，请不要使用本文件。

Trademarks

All referenced product or service names and trademarks are the property of their respective owners.

版本 2026-09-14

Infineon Technologies AG 出版，
德国 Neubiberg 85579

版权 © 2026 Infineon Technologies AG
及其关联公司。
保留所有权利。

Do you have a question about this
document?

Email:

erratum@infineon.com

重要通知

Infineon Technologies AG 及其关联公司（以下简称“英飞凌”）销售或提供和交付的产品（可能也包括样品，且可能由硬件或软件或两者组成）（以下简称“产品”），应遵守客户与英飞凌签订的框架供应合同或其他书面协议的条款和条件，如无上述合同或其他书面协议，则应遵守适用的英飞凌销售条件。只有在英飞凌明确书面同意的情况下，客户的一般条款和条件或对适用的英飞凌销售条件的偏离才对英飞凌具有约束力。

为避免疑义，英飞凌不承担不侵犯第三方权利的所有保证和默示保证，例如对特定用途/目的的适用性或适销性的保证。

英飞凌对与样品、应用或客户对任何产品的具体使用有关的任何信息或本文件中给出的任何示例或典型值概不负责。

本文件中包含的数据仅供具有技术资格和技能的客户代表使用。客户有责任评估产品对预期应用和客户特定用途的适用性，并在预期应用和客户特定用途中验证本文件中包含的所有相关技术数据。客户有责任正确设计、编程和测试预期应用的功能性和安全性，并遵守与其使用相关的法律要求。

除非英飞凌另行明确批准，否则产品不得用于任何因产品故障或使用产品的任何后果可合理预期会导致人身伤害的应用。但是，上述规定并不妨碍客户在英飞凌明确设计和销售的使用领域中使用任何产品，但是客户对应用负有全部责任。

英飞凌明确保留根据适用法律，如《德国版权法》（UrhG）第 44b 条，将其内容用于商业资料和数据勘探（TDM）的权利。

如果产品包含安全功能：

由于任何计算设备都不可能绝对安全，尽管产品采取了安全措施，但英飞凌不保证产品不会被入侵、数据不会被盗或遗失，或不会发生其他漏洞（以下简称“安全漏洞”），英飞凌对任何安全漏洞不承担任何责任。

如果本文件包含或引用软件：

根据美国、德国和世界其他国家的知识产权法律和条约，该软件归英飞凌所有。英飞凌保留所有权利。因此，您只能按照软件附带的软件授权协议的规定使用本软件。

如果没有适用的软件授权协议，英飞凌特此授予您个人的、非排他性的、不可转让的软件知识产权授权（无权转授权）：(a) 对于以源代码形式提供的软件，仅在贵组织内部修改和复制该软件用于英飞凌硬件产品；及 (b) 对于以二进制代码 (binary code) 形式对外向终端用户分发该软件，仅得用于英飞凌硬件产品。禁止对本软件进行任何其他使用、复制、修改、翻译或编译。有关产品、技术、交货条款和条件以及价格的详细信息，请联系离您最近的英飞凌办公室或访问 <https://www.infineon.com>。