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1 Absolute maximum ratings

Table 2 Absolute maximum ratings at $T_A = 25\text{ °C}$, unless otherwise specified

Parameter	Symbol	Values		Unit	Note or test condition
		Min.	Max.		
Diode reverse voltage	V_R	–	4	V	
Forward current	I_F	–	110	mA	
Total power dissipation	P_{TOT}	–	100	mW	$T_S \leq 67\text{ °C}$ ¹⁾
Junction temperature	T_J	–	150	°C	
Operating temperature	T_{OP}	-55	150		
Storage temperature	T_{STG}	-55	150		

Attention: Stresses above the maximum values listed here may cause permanent damage to the device. Exposure to absolute maximum rating conditions for extended periods may affect device reliability. Exceeding only one of these values may cause irreversible damage to the component.

¹ T_S is the soldering point temperature.

Electrical performance in test fixture

2 Electrical performance in test fixture

2.1 Electrical characteristics

Table 3 Electrical characteristics at $T_A = 25\text{ °C}$, unless otherwise specified

Parameter	Symbol	Values			Unit	Note or test condition
		Min.	Typ.	Max.		
Breakdown voltage	V_{BR}	4	–	–	V	$I_R = 100\text{ }\mu\text{A}$
Reverse current	I_R	–	–	5	μA	$V_R = 1\text{ V}$
Forward voltage	V_F	0.16	0.25	0.32	V	$I_F = 1\text{ mA}$
		0.25	0.35	0.41		$I_F = 10\text{ mA}$
Forward voltage matching	ΔV_F	–	–	20	mV	$I_F = 10\text{ mA}$ ¹⁾
Differential forward resistance	R_F	–	5.8	–	Ω	$I_F = 10\text{ mA} / 50\text{ mA}$ ²⁾
Capacitance	C	–	0.29	0.5	pF	$V_R = 0\text{ V}, f = 1\text{ MHz}$
Inductance	L_S	–	2	–	nH	

¹ ΔV_F is the difference between lowest and highest V_F in a multiple diode component.

²
$$R_F = \frac{V_F(50\text{ mA}) - V_F(10\text{ mA})}{50\text{ mA} - 10\text{ mA}}$$

Electrical performance in test fixture

2.2 Characteristic curves

At $T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

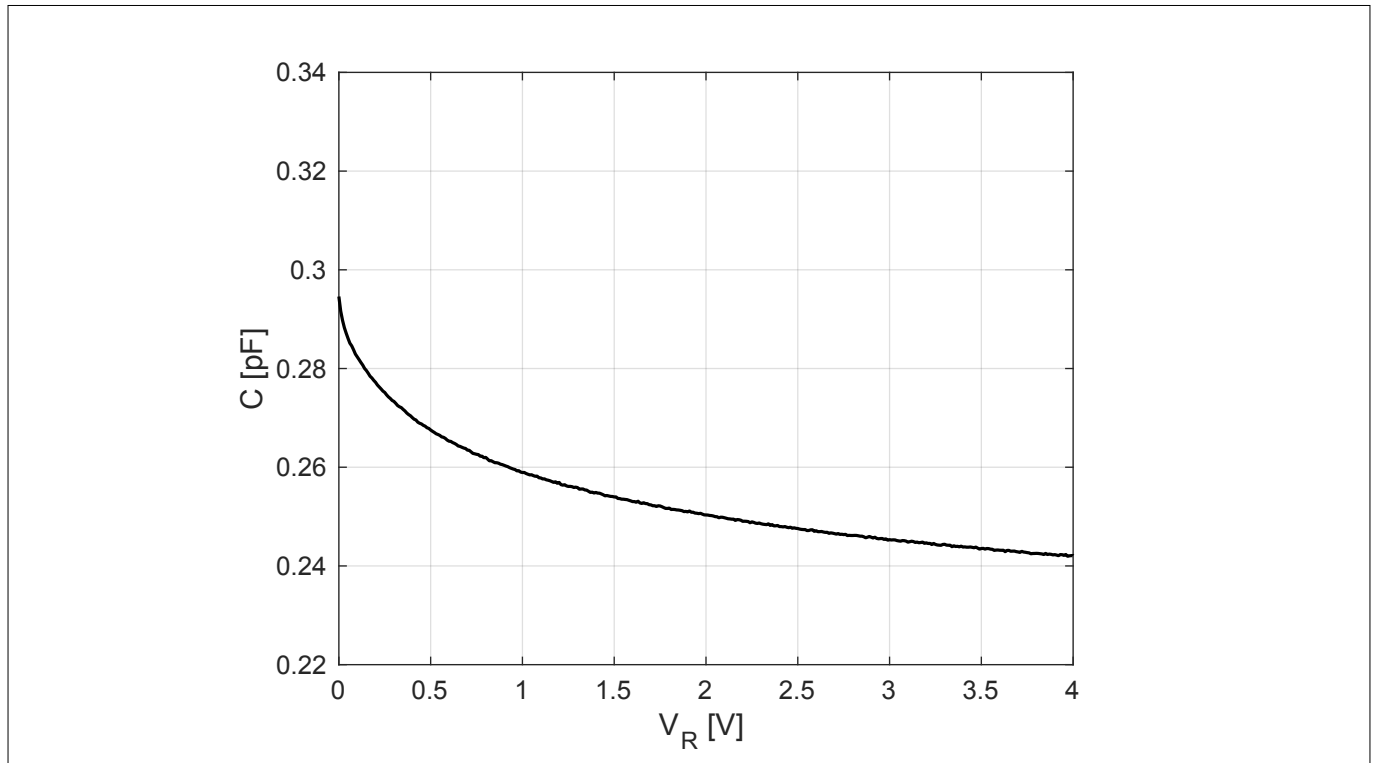


Figure 1 Diode capacitance C vs. reverse voltage V_R at frequency $f = 1\text{ MHz}$

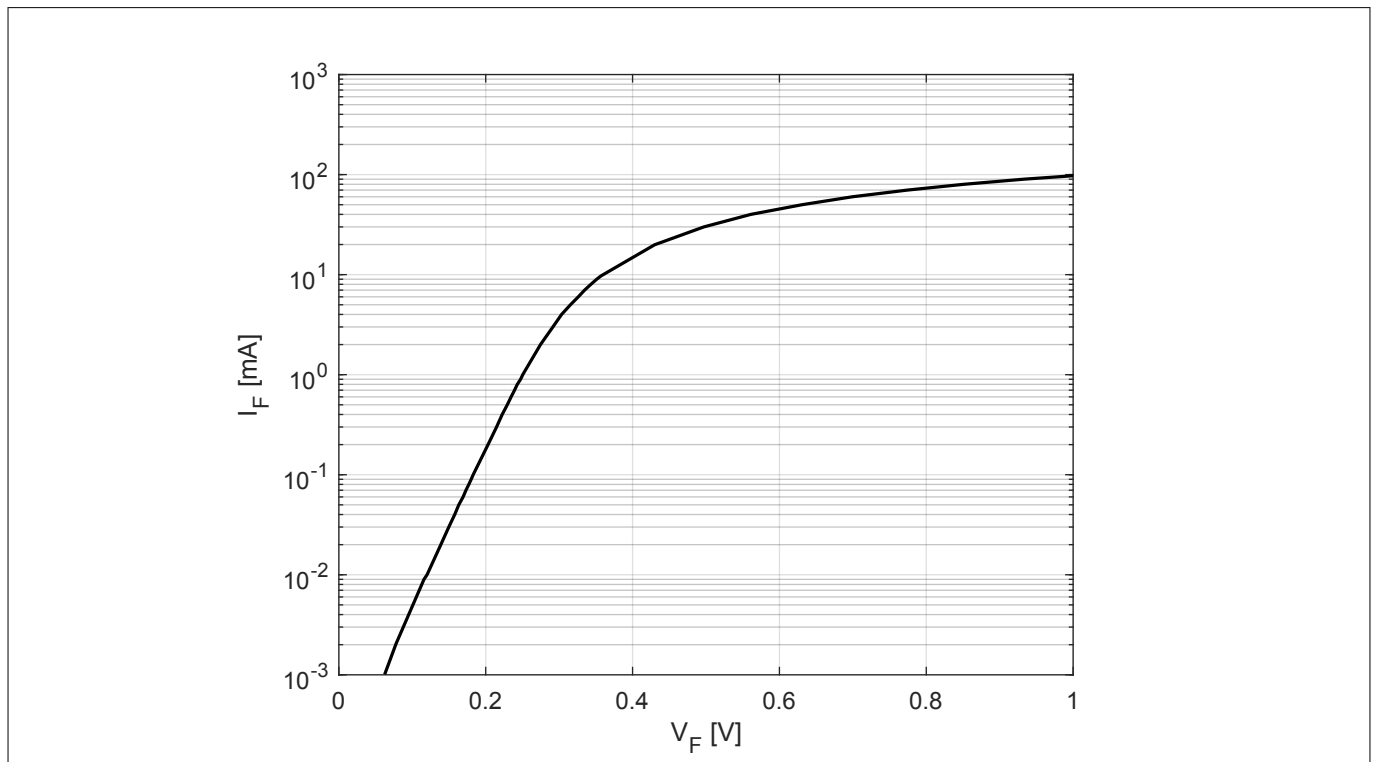


Figure 2 Forward current I_F vs. forward voltage V_F

Electrical performance in test fixture

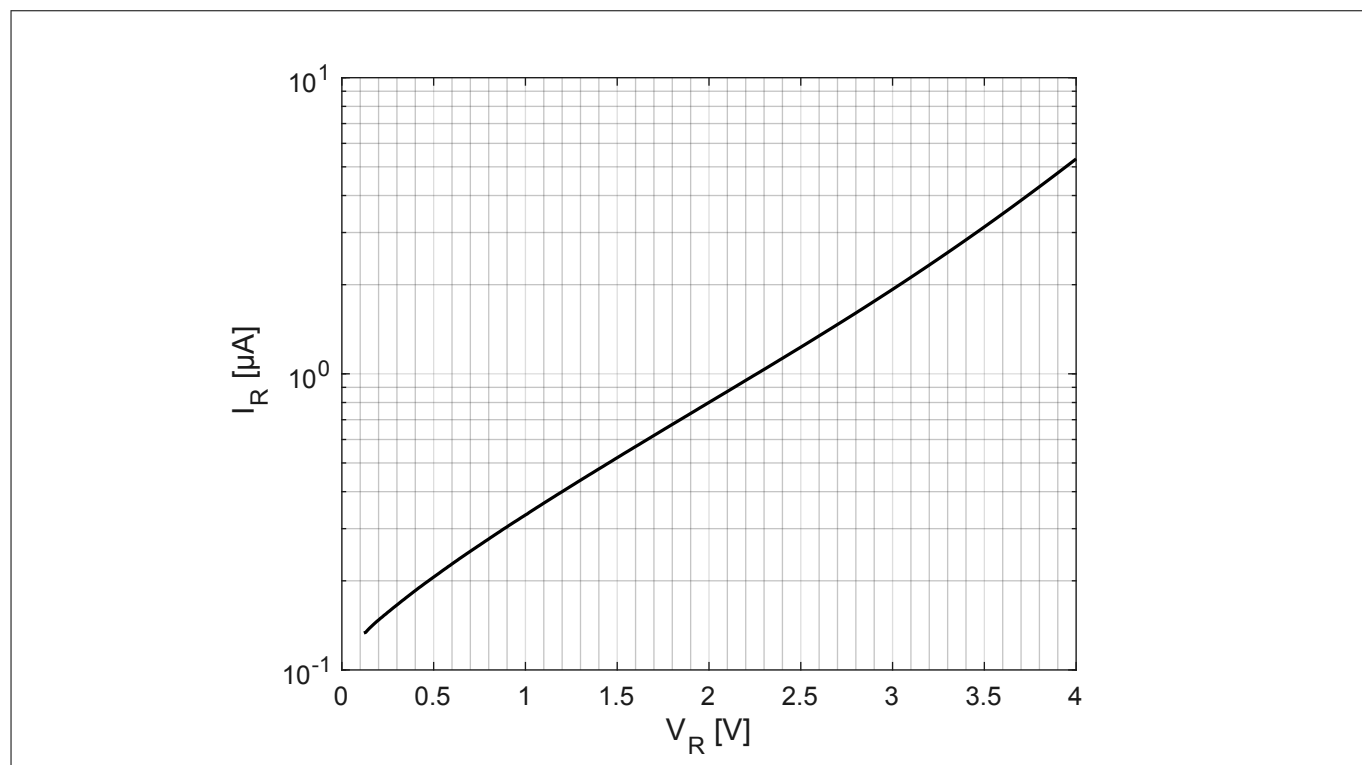


Figure 3 **Reverse current I_R vs. reverse voltage V_R**

Note: *The curves shown in this chapter have been generated using typical devices but shall not be understood as a guarantee that all devices have identical characteristic curves.*

Thermal characteristics

3 Thermal characteristics

Table 4 Thermal resistance

Parameter	Sym bol	Values			Unit	Note or test condition
		Min.	Typ.	Max.		
Thermal resistance (junction - soldering point)	R_{thJS}	–	830	–	K/W	$T_S = 67\text{ °C}$ ¹⁾

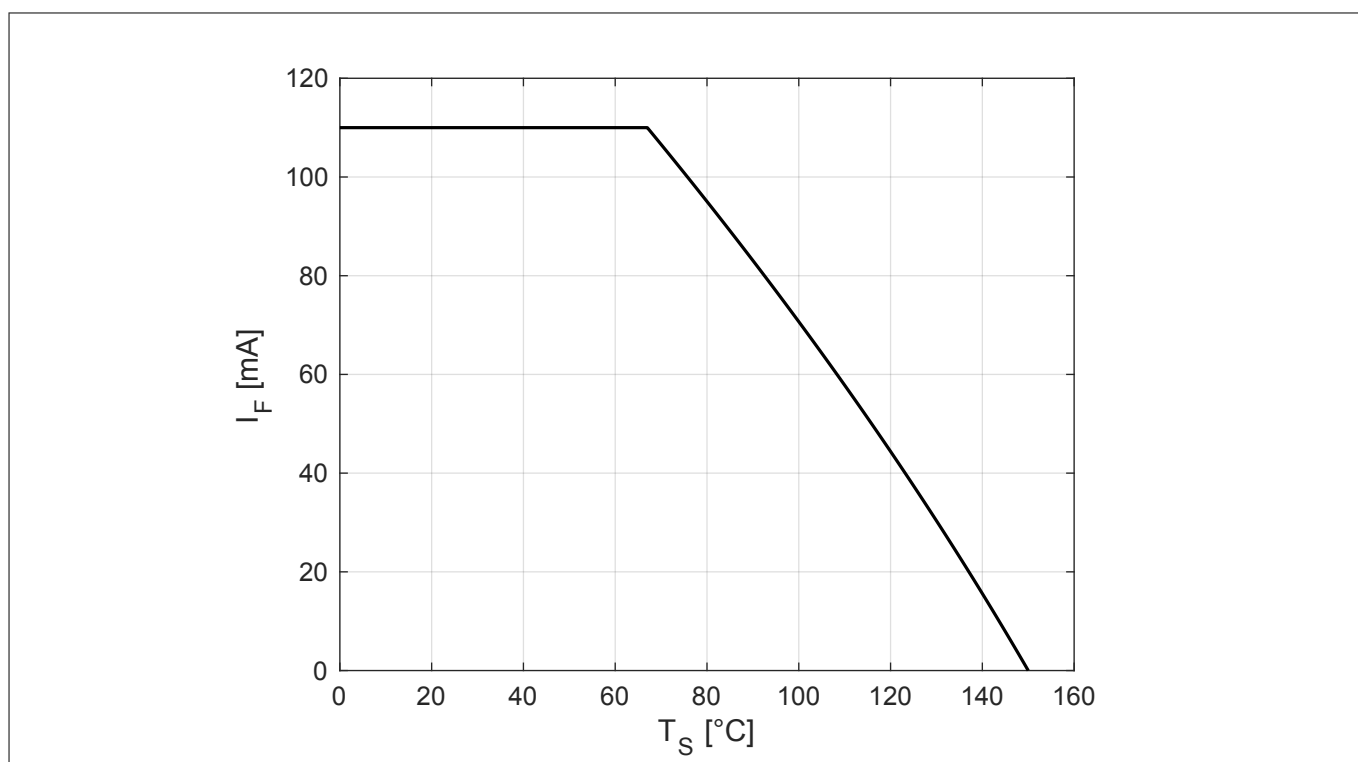


Figure 4 Permissible forward current I_F in DC operation

¹ For R_{thJS} in other conditions refer to the curves in this chapter.

Thermal characteristics

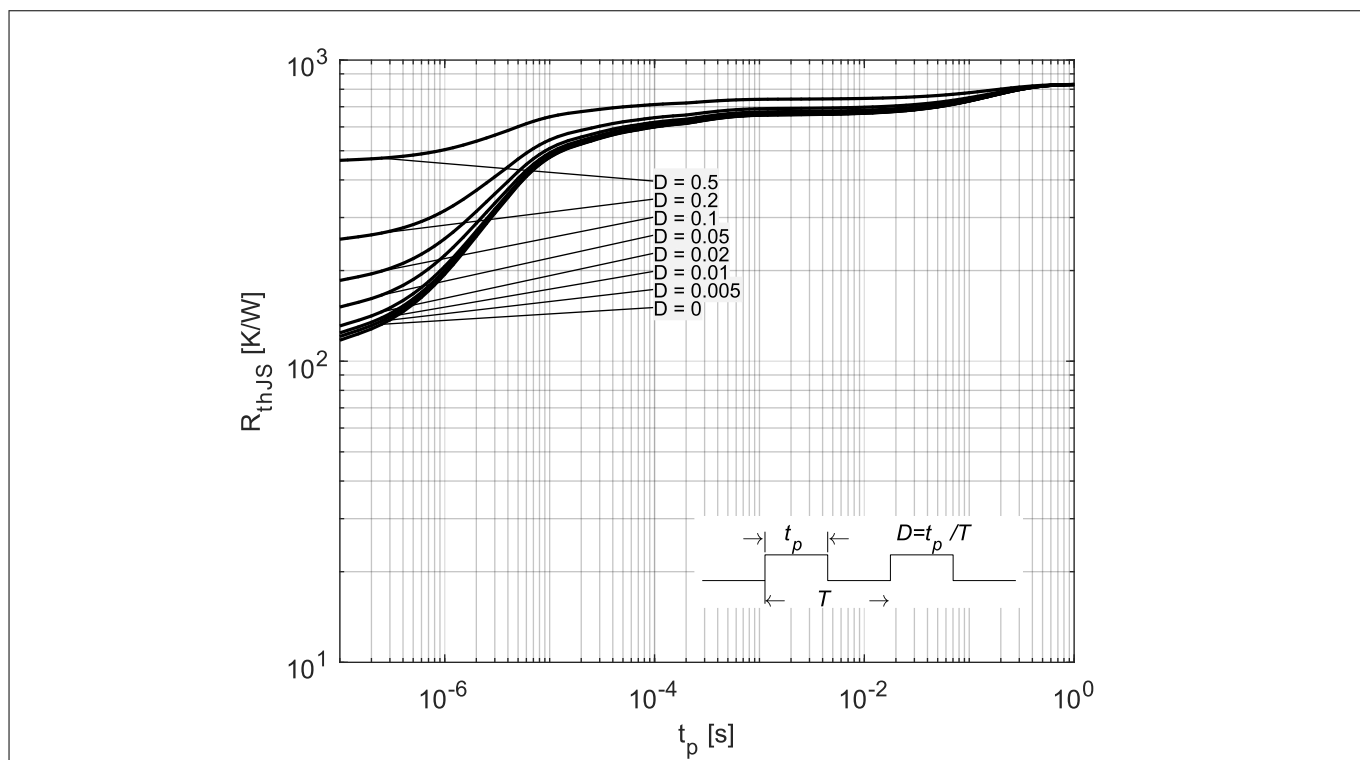


Figure 5 Thermal resistance R_{thJS} in pulse operation

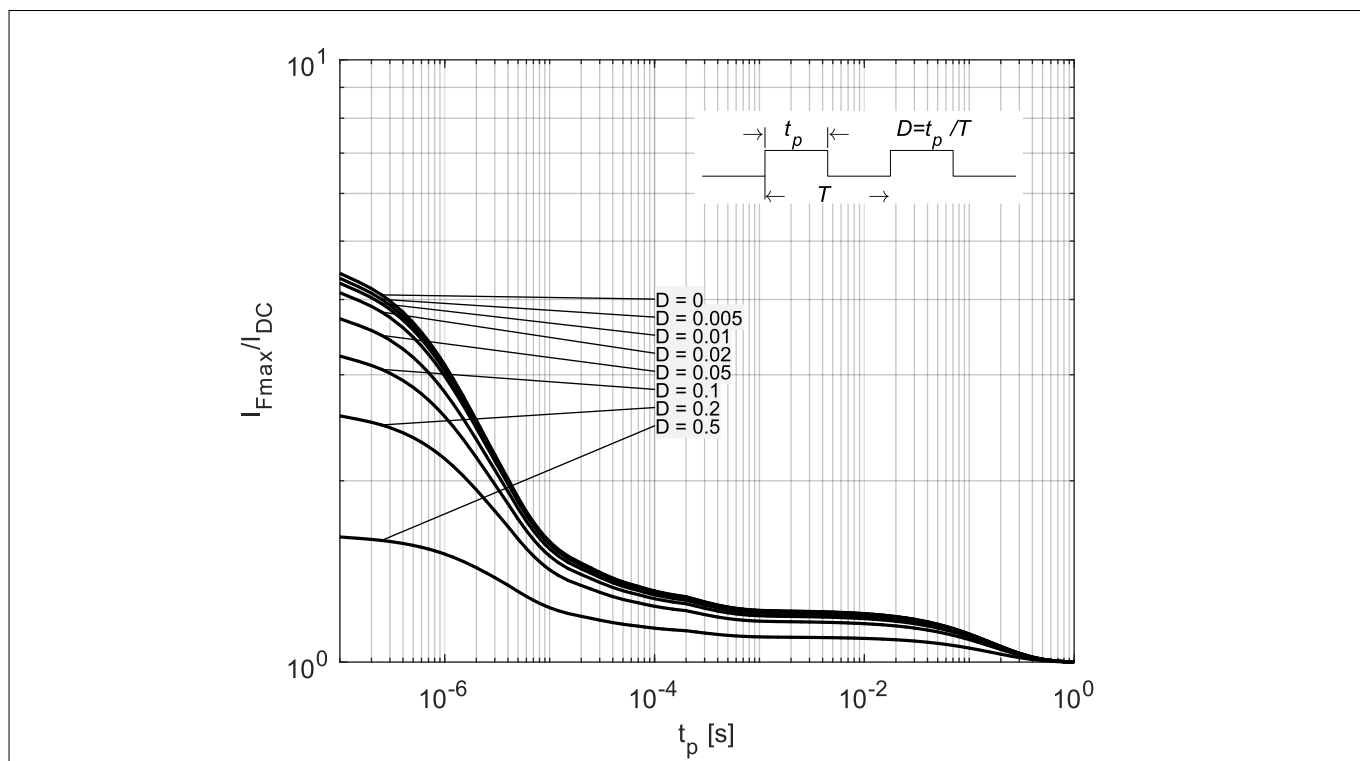
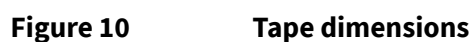


Figure 6 Permissible forward current ratio I_{Fmax}/I_{DC} in pulse operation



Revision history

Revision history

Document version	Date of release	Description of changes
1.0	2018-09-07	• Change from series datasheet to individual one • Initial release of datasheet • Typical values and curves updated to the values of the production (No product or process change behind) • Typical values added • Typical curves removed

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Edition 2018-06-30

Published by
Infineon Technologies AG
81726 Munich, Germany

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Document reference
IFX-vsd1515576924370

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