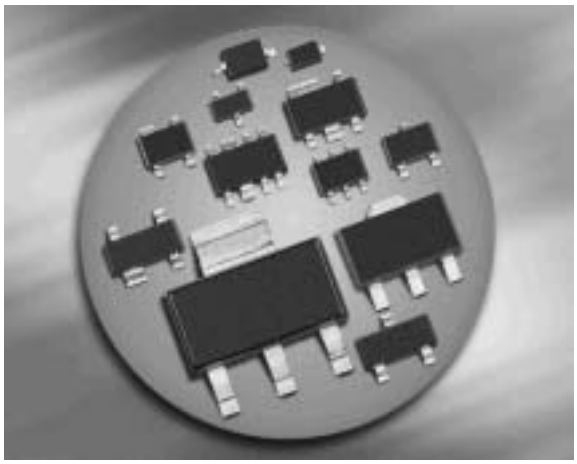
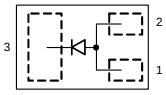
Low VF Schottky Diode



- Forward current: 1 A
- Reverse voltage: 30 V
- Low forward voltage and smallest package form factor (1.0 x 0.6 x < 0.4 mm) for mobile phone battery charger application
- Pb-free (RoHS compliant) package[1)]
- Qualified according AEC Q101

AEC Qualified RoHS

BAS3010S-03LRH



Type	Package	Configuration	Marking
BAS3010S-03LRH*	TSLP-3-7	single	1S

* Preliminary data

Maximum Ratings at T_A = 25°C, unless otherwise specified

Parameter	Symbol	Value	Unit
Diode reverse voltage[2)]	V_R	30	V
Forward current[2)3)]	I_F	1	A
Repetitive peak forward current[3)] ($t_p \leq 1$ ms, $D \leq 0.25$)	I_{FRM}	3.5	
Non-repetitive peak surge forward current[3)] ($t \leq 10$ ms)	I_{FSM}	5	
Junction temperature	T_j	150	°C
Operating temperature range	T_{op}	-55 ... 125	
Storage temperature	T_{stg}	-65 ... 150	

[1]Pb-containing package may be available upon special request
[2]For T_A > 25°C the derating of V_R and I_F has to be considered.
[3]Only valid if pin 1 and 2 are connected in parallel

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point[1)]	R_{thJS}	≤ 38	K/W

Electrical Characteristics at T_A = 25°C, unless otherwise specified

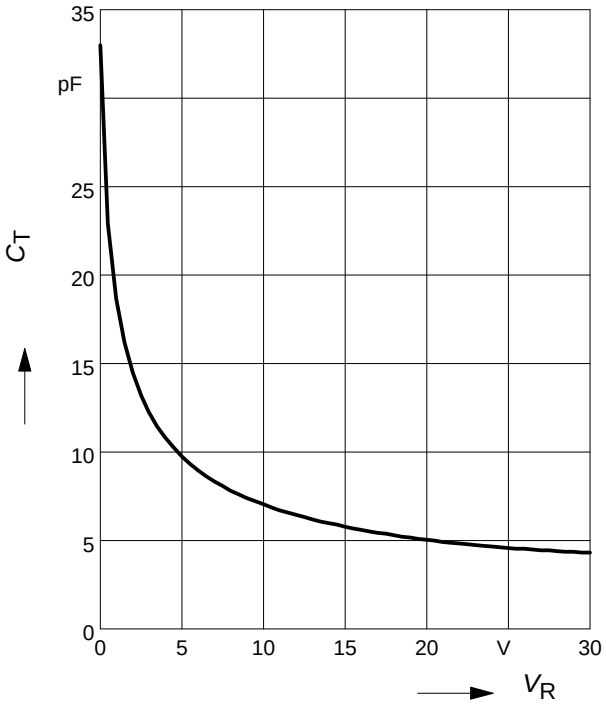
Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Reverse current[2)]	I_R	-	-	-	µA
V_R = 5 V		-	-	15	
V_R = 10 V		-	-	30	
V_R = 30 V		-	-	300	
Forward voltage[2)]	V_F	-	-	-	mV
I_F = 100 mA		-	340	390	
I_F = 350 mA		-	400	450	
I_F = 1000 mA		-	570	650	
AC Characteristics					
Diode capacitance	C_T	-	10	15	pF
V_R = 5 V, f = 1 MHz					

[1]For calculation of R_{thJA} please refer to Application Note Thermal Resistance

[2]Pulsed test: t_p = 300 µs; D = 0.01

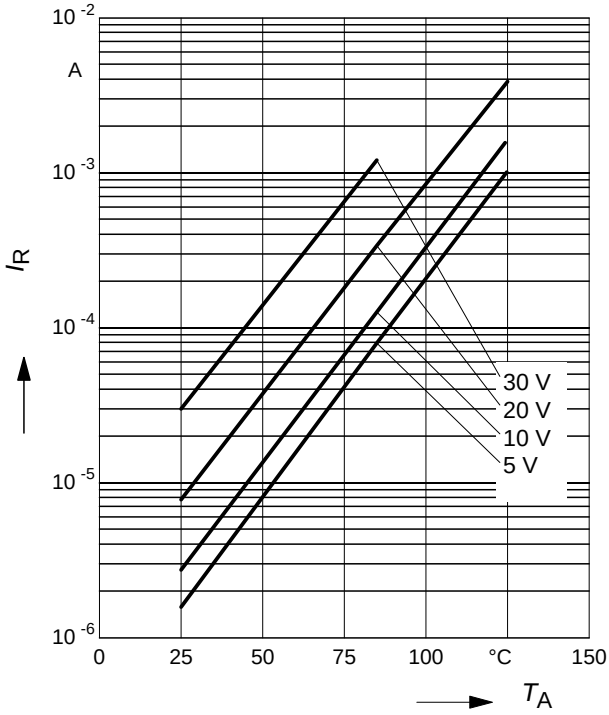
Diode capacitance $C_T = f(V_R)$

f = 1MHz



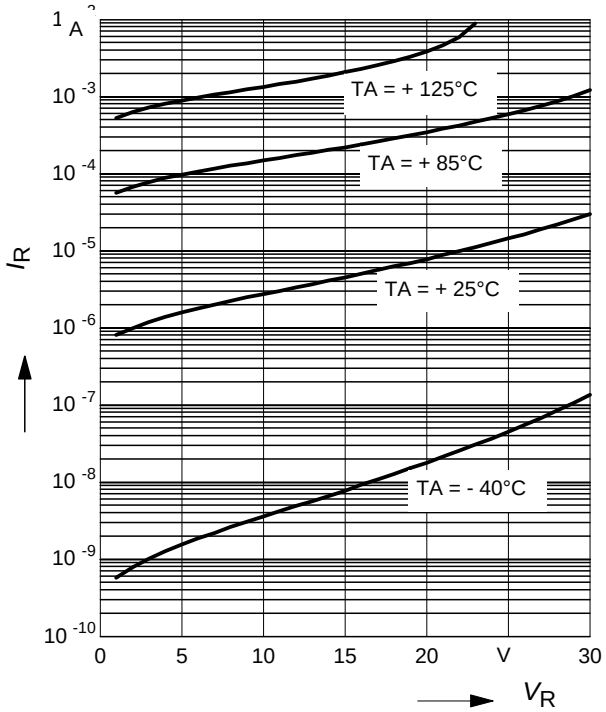
Reverse current $I_R = f(T_A)$

V_R = Parameter



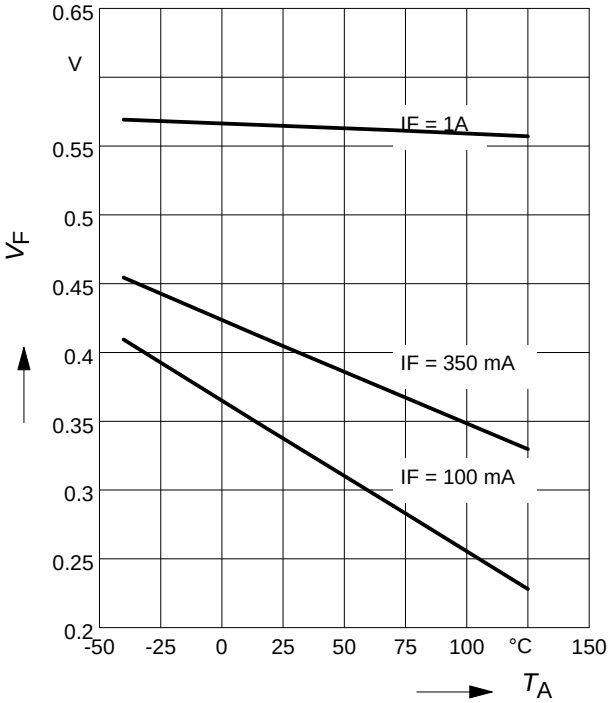
Reverse current $I_R = f(V_R)$

T_A = Parameter



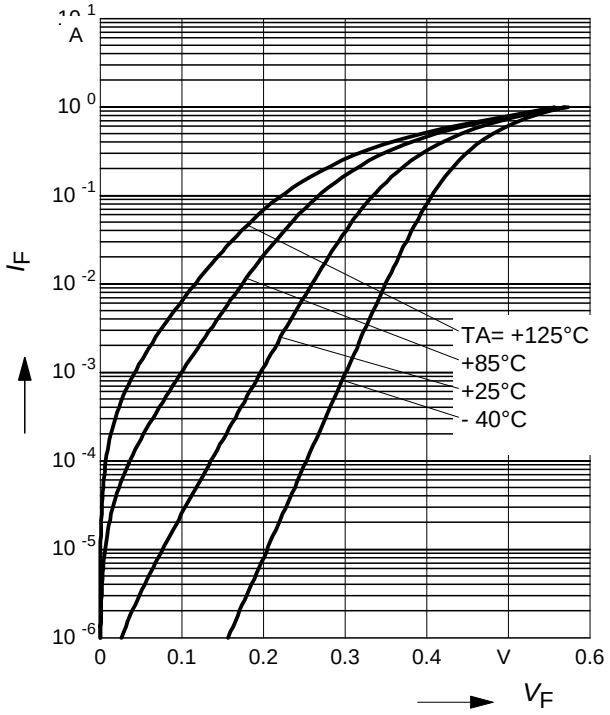
Forward Voltage $V_F = f(T_A)$

I_F = Parameter

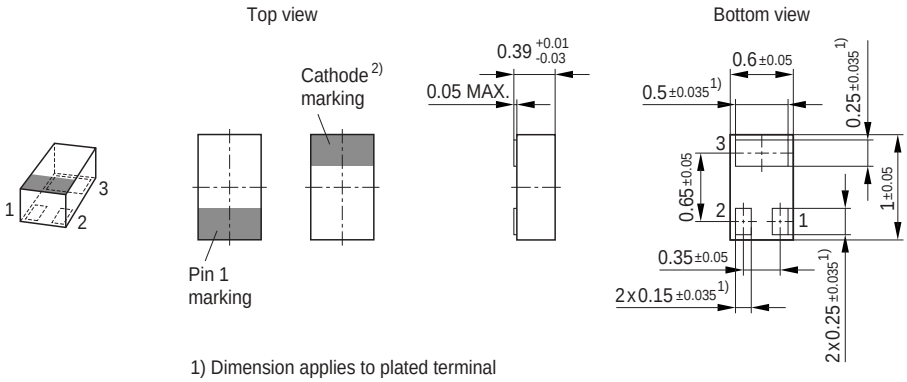


Forward current $I_F = f(V_F)$

T_A = Parameter



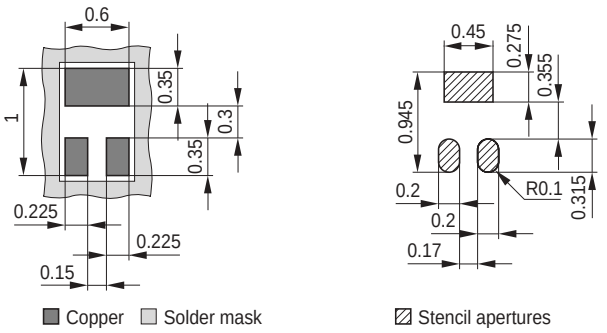
Package Outline



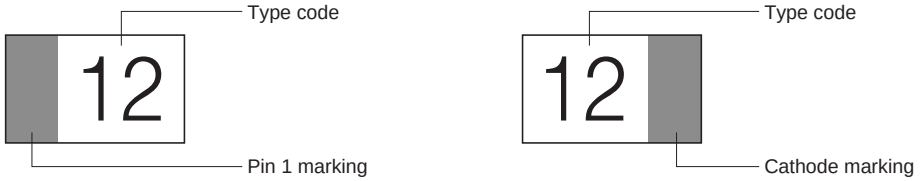
1) Dimension applies to plated terminal
2) Only for diodes, cathode marking on pin 3

Foot Print

For board assembly information please refer to Infineon website "Packages"

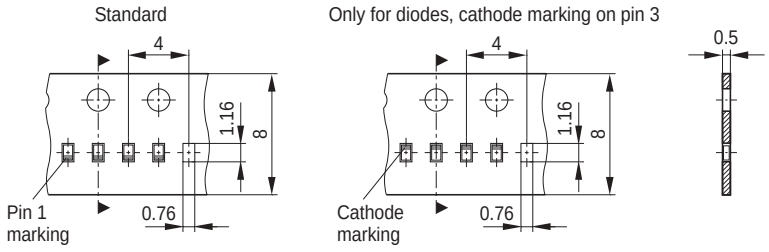


Marking Layout



Standard Packing

Reel ø180 mm = 15.000 Pieces/Reel



Edition 2006-02-01
Published by
Infineon Technologies AG
81726 München, Germany

Attention please!

The information given in this dokument shall in no event be regarded as a guarantee of conditions or characteristics (“Beschaffenheitsgarantie”). With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party.

Information

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office (**www.infineon.com**).

Warnings

Due to technical requirements components may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies Office.
Infineon Technologies Components may only be used in life-support devices or systems with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system, or to affect the safety or effectiveness of that device or system.
Life support devices or systems are intended to be implanted in the human body, or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.