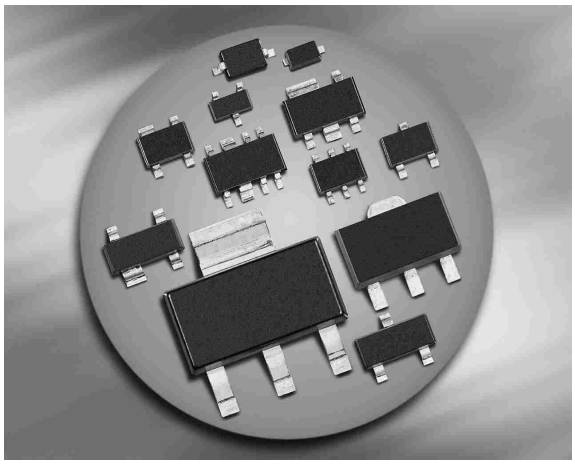
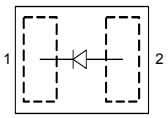
Low VF Schottky Diode

- Reverse voltage: 40 V
- Forward current: 0.2 A
- 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

RoHS



BAS4002S-02LRH



Type	Package	Configuration	Marking
BAS4002S-02LRH	TSLP-2-17	single	2A

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

Parameter	Symbol	Value	Unit
Diode reverse voltage[1)]	V_R	40	V
Forward current[1)], $T_S \leq$ 138 °C	I_F	0.2	A
Non-repetitive peak surge forward current ($t \leq$ 10 ms)	I_{FSM}	2	
Junction temperature	T_j	150	°C
Operating temperature range	T_{op}	-55 ...150	
Storage temperature	T_{stg}	-65 ...150	
Thermal Resistance			
Junction - soldering point[2)]	R_{thJS}	≤ 60	K/W

[1]For T_A > 25 °C the derating of V_R and I_F has to be considered.

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

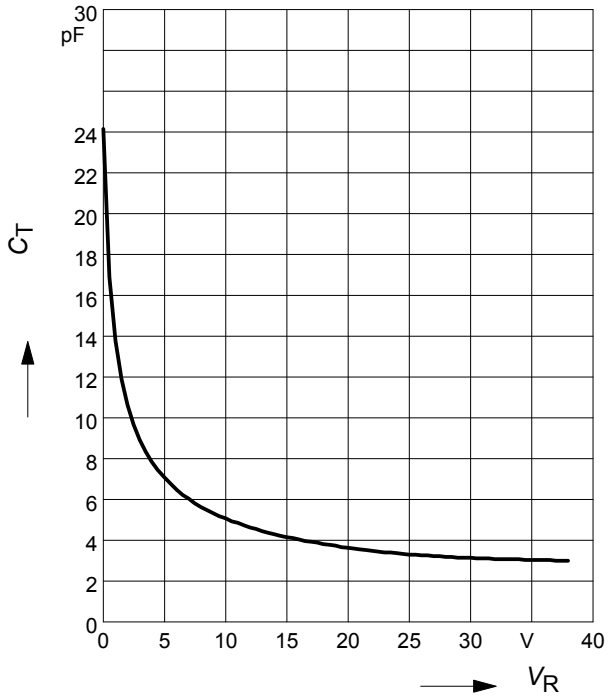
Electrical Characteristics at T_A = 25°C, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Reverse current[1)]	I_R				µA
V_R = 5 V		-	-	0.5	
V_R = 10 V		-	-	1	
V_R = 40 V		-	-	10	
Forward voltage[1)]	V_F				mV
I_F = 0.1 mA		-	210	250	
I_F = 1 mA		-	270	310	
I_F = 10 mA		-	330	370	
I_F = 100 mA		-	420	470	
I_F = 200 mA		-	470	550	
AC Characteristics					
Diode capacitance	C_T	-	7	12	pF
V_R = 5 V, f = 1 MHz					

[1]Pulsed test: t_p = 300 µs, D = 0.01

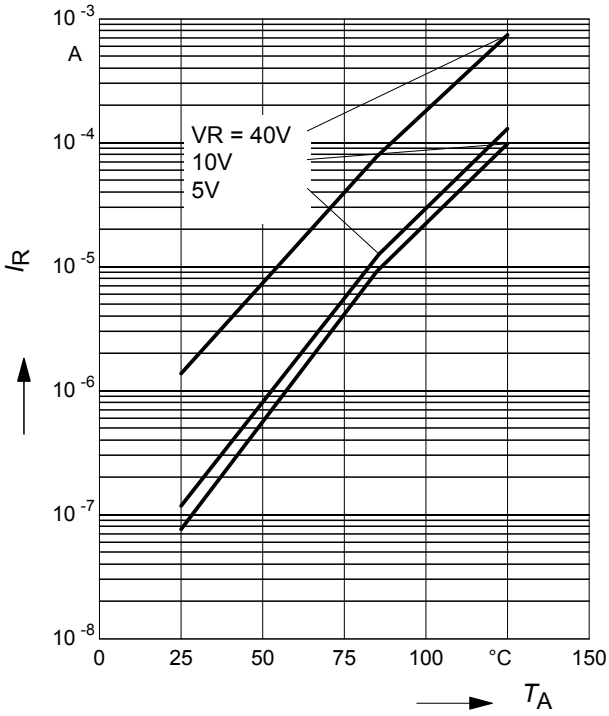
Diode capacitance $C_T = f(V_R)$

f = 1MHz



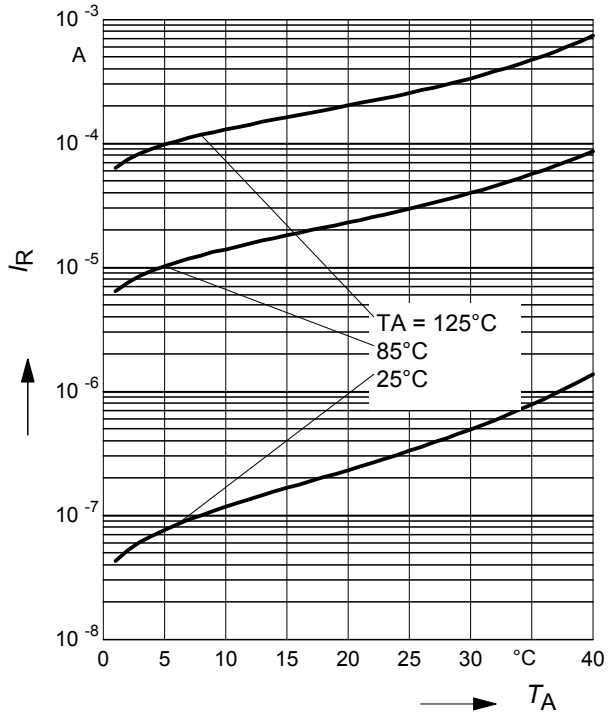
Reverse current $I_R = f(T_A)$

V_R = Parameter



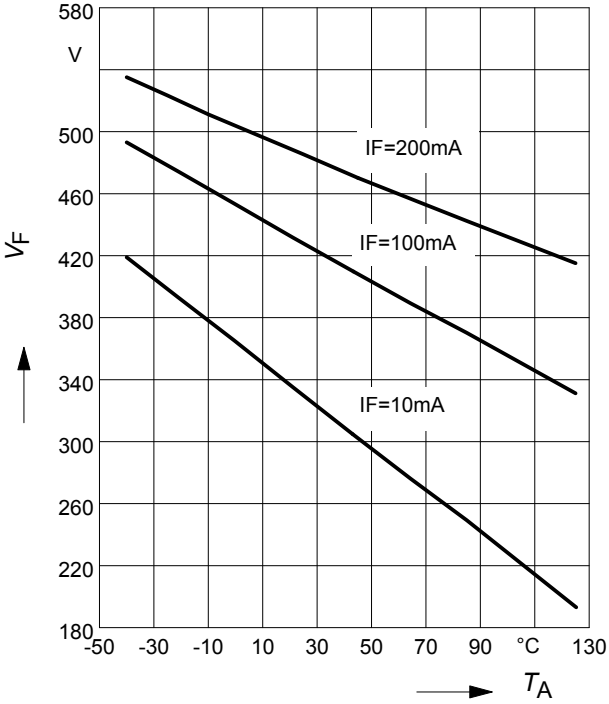
Reverse current $I_R = f(V_R)$

T_A = Parameter

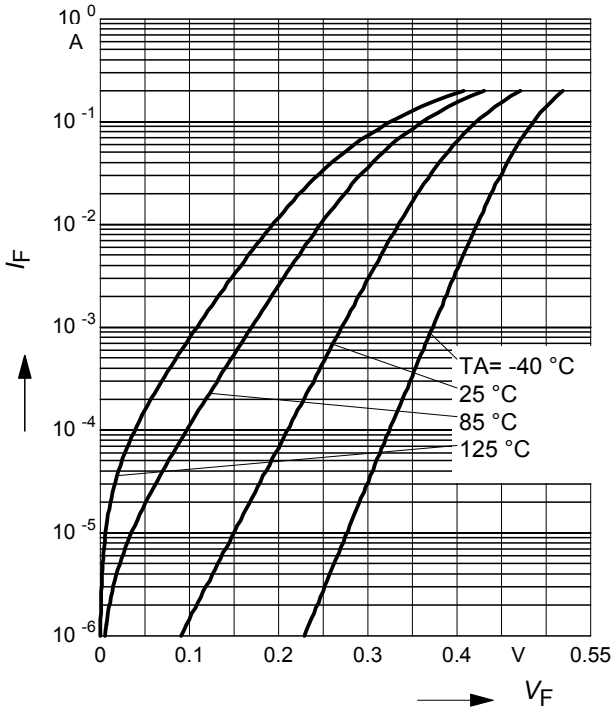


Forward Voltage $V_F = f(T_A)$

I_F = Parameter



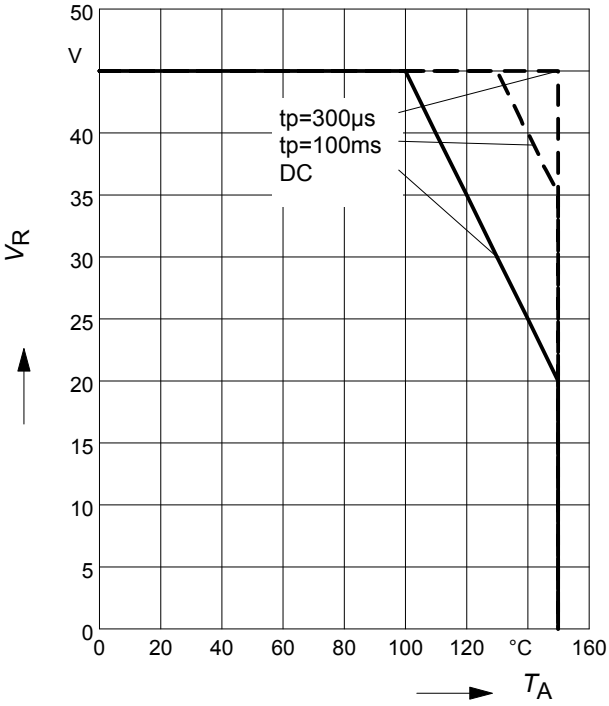
Forward current $I_F = f(V_F)$



Permissible Reverse voltage $V_R = f(T_A)$

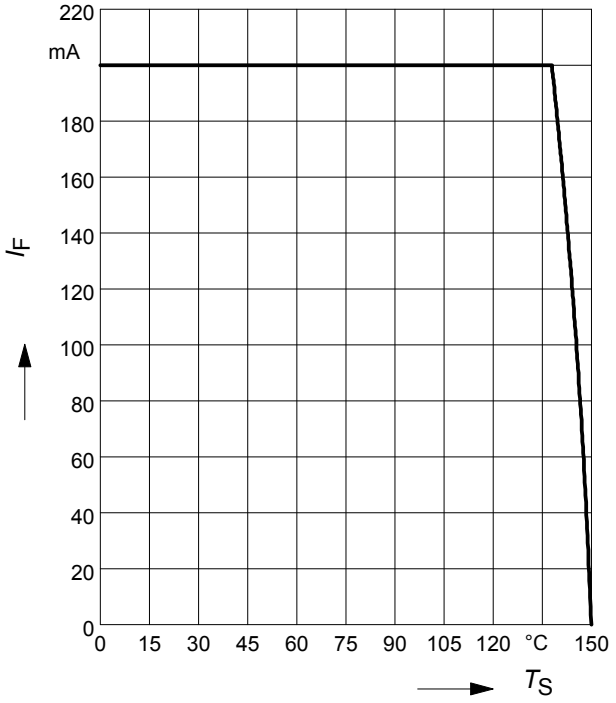
t_p = Paramter, Duty cycle < 0.01

Device mounted on PCB with R_{th} = 160 K/W

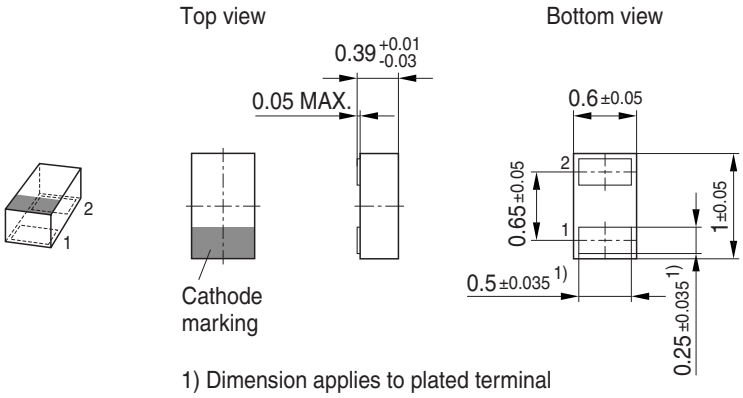


Forward current $I_F = f(T_S)$

BAS4002S-02LRH



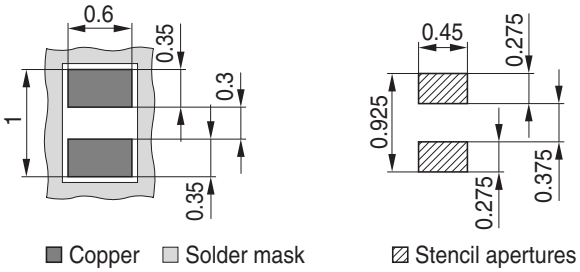
Package Outline



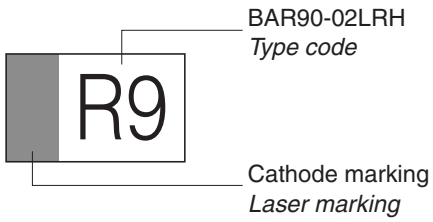
1) Dimension applies to plated terminal

Foot Print

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

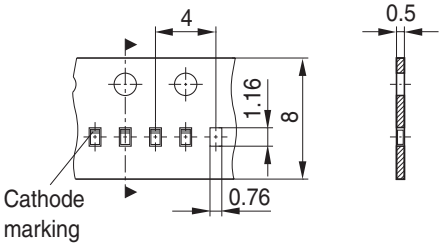


Marking Layout (Example)



Standard Packing

Reel ø180 mm = 15.000 Pieces/Reel
Reel ø330 mm = 50.000 Pieces/Reel (optional)



Edition 2009-11-16

Published by
Infineon Technologies AG
81726 Munich, Germany

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