



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

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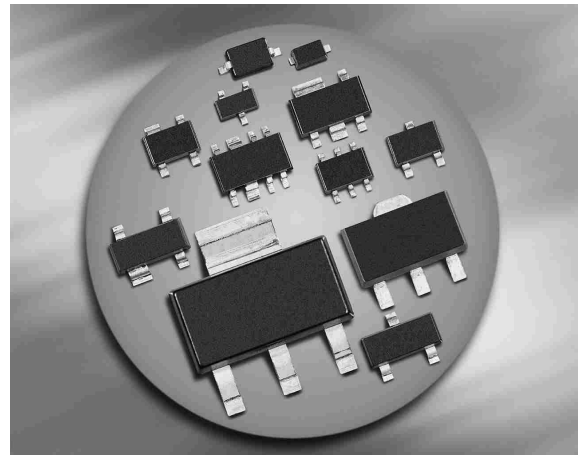
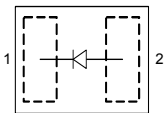
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**Low VF Schottky Diode**

- 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


**BAS4002S-02LRH**


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

**Maximum Ratings at  $T_A = 25\text{ °C}$ , unless otherwise specified**

Parameter	Symbol	Value	Unit
Diode reverse voltage <sup>1)</sup>	$V_R$	40	V
Forward current <sup>1)</sup> , $T_S \leq 138\text{ °C}$	$I_F$	0.2	A
Non-repetitive peak surge forward current ( $t \leq 10\text{ ms}$ )	$I_{FSM}$	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 <sup>2)</sup>	$R_{thJS}$	$\leq 60$	K/W
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<sup>1)</sup>For  $T_A > 25\text{ °C}$  the derating of  $V_R$  and  $I_F$  has to be considered.

<sup>2)</sup>For calculation of  $R_{thJA}$  please refer to Application Note Thermal Resistance

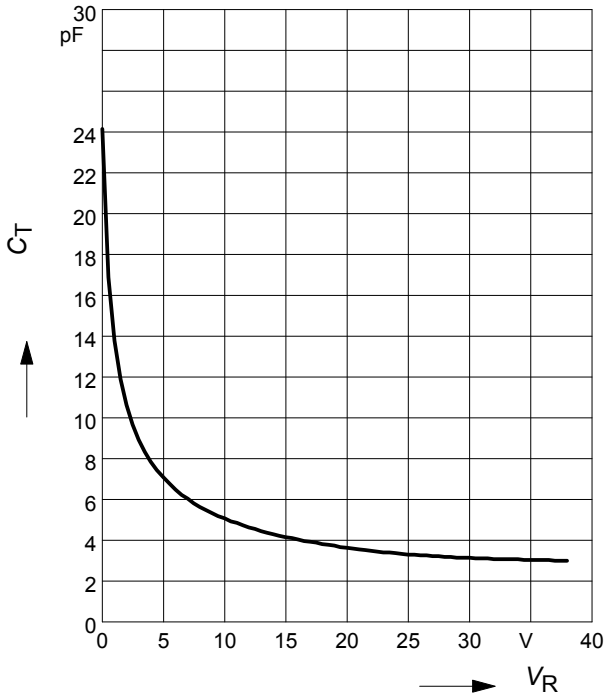
**Electrical Characteristics at  $T_A = 25^\circ\text{C}$ , unless otherwise specified**

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
<b>DC Characteristics</b>					
Reverse current <sup>1)</sup>	$I_R$				$\mu\text{A}$
$V_R = 5\text{ V}$		-	-	0.5	
$V_R = 10\text{ V}$		-	-	1	
$V_R = 40\text{ V}$		-	-	10	
Forward voltage <sup>1)</sup>	$V_F$				$\text{mV}$
$I_F = 0.1\text{ mA}$		-	210	250	
$I_F = 1\text{ mA}$		-	270	310	
$I_F = 10\text{ mA}$		-	330	370	
$I_F = 100\text{ mA}$		-	420	470	
$I_F = 200\text{ mA}$		-	470	550	
<b>AC Characteristics</b>					
Diode capacitance	$C_T$	-	7	12	$\text{pF}$
$V_R = 5\text{ V}, f = 1\text{ MHz}$					

<sup>1</sup>Pulsed test:  $t_p = 300\ \mu\text{s}$ ,  $D = 0.01$

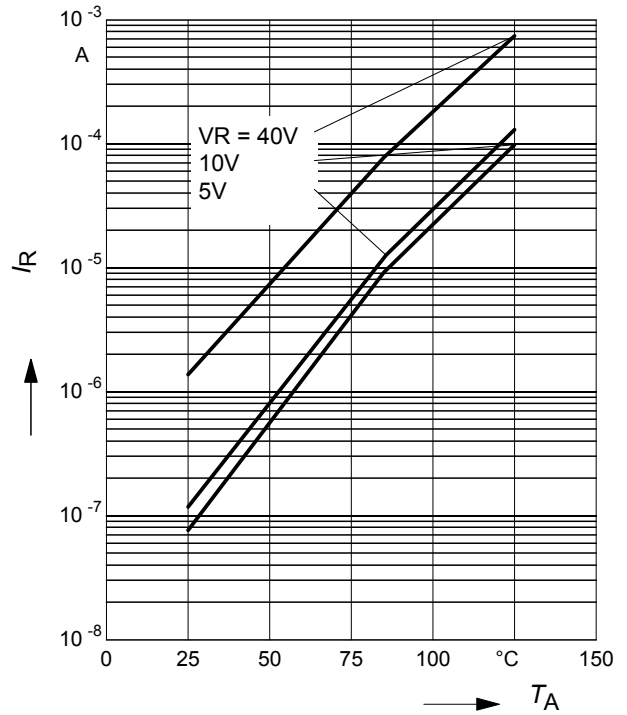
**Diode capacitance  $C_T = f(V_R)$**

$f = 1\text{MHz}$



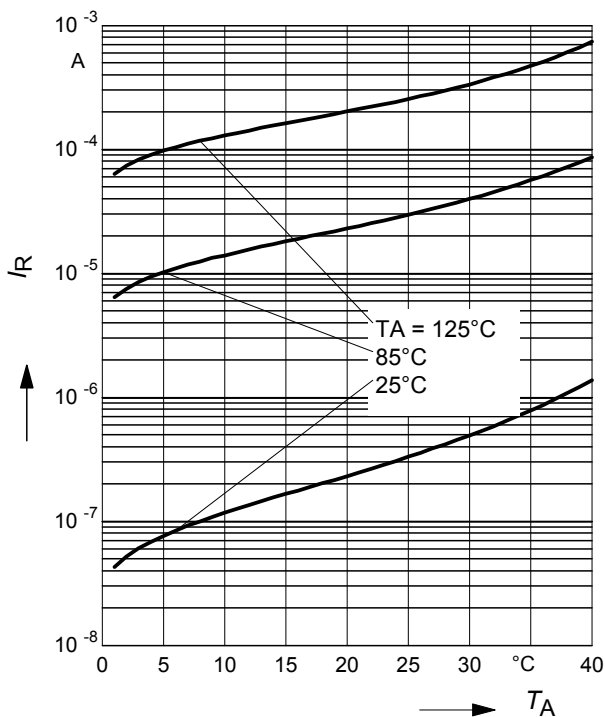
**Reverse current  $I_R = f(T_A)$**

$V_R = \text{Parameter}$



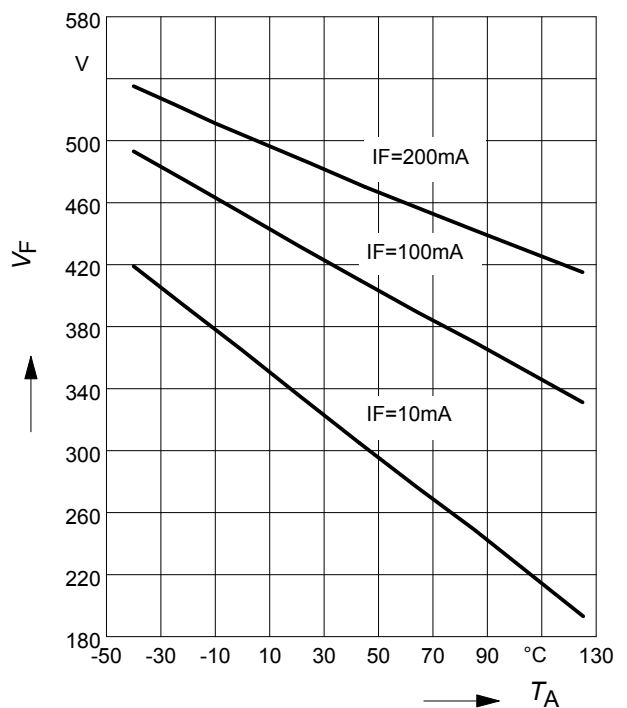
**Reverse current  $I_R = f(V_R)$**

$T_A = \text{Parameter}$

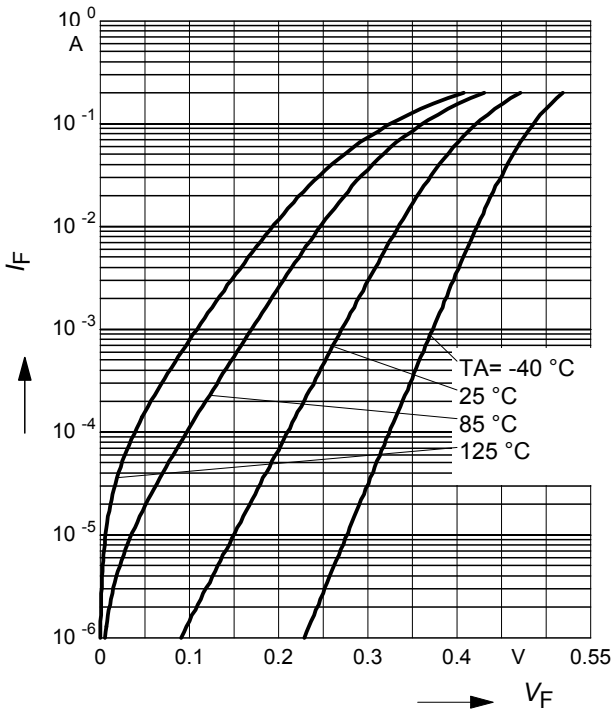


**Forward Voltage  $V_F = f(T_A)$**

$I_F = \text{Parameter}$



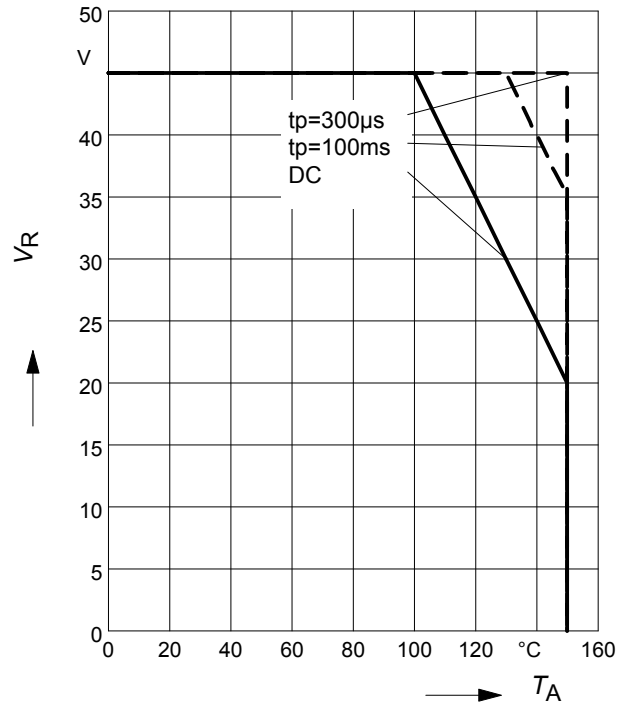
**Forward current  $I_F = f(V_F)$**



**Permissible Reverse voltage  $V_R = f(T_A)$**

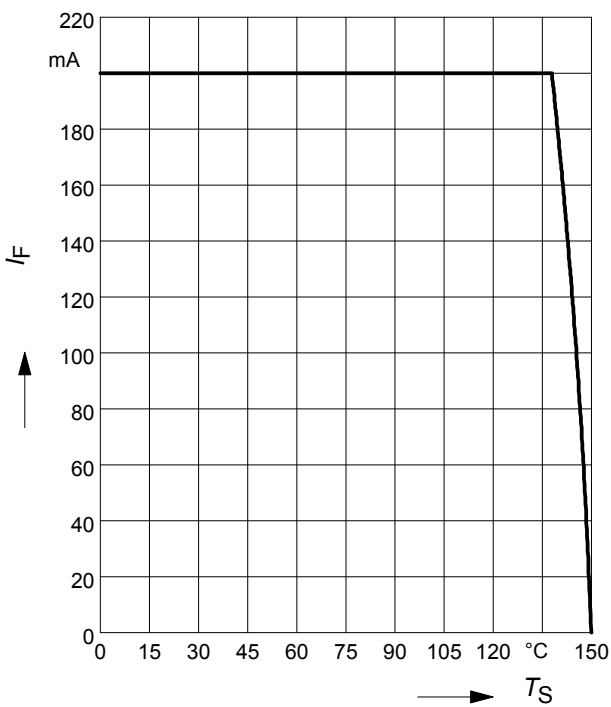
$t_p$  = Parameter, Duty cycle < 0.01

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

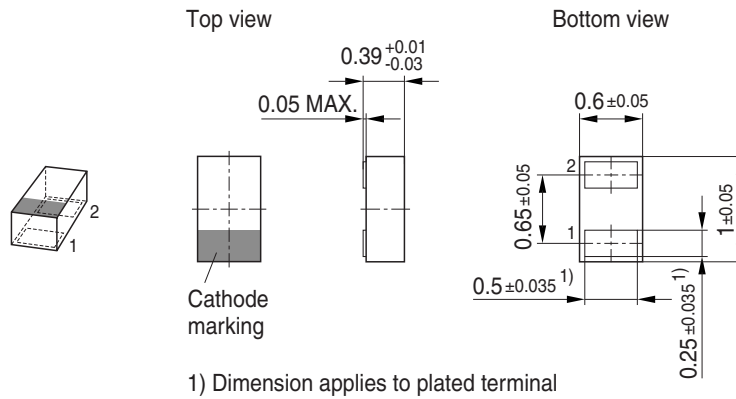


**Forward current  $I_F = f(T_S)$**

BAS4002S-02LRH

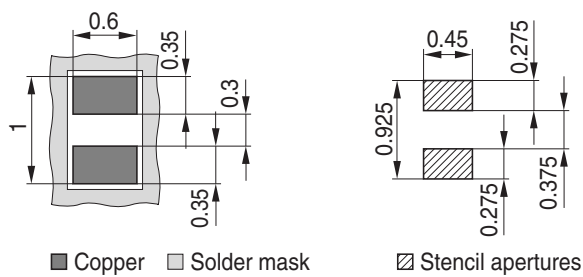


### Package Outline

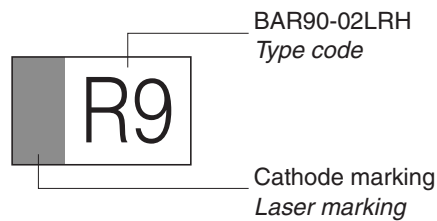


### Foot Print

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

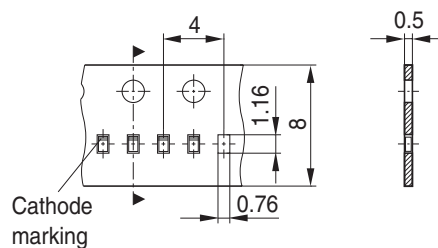


### Marking Layout (Example)



### Standard Packing

Reel  $\varnothing$ 180 mm = 15.000 Pieces/Reel  
 Reel  $\varnothing$ 330 mm = 50.000 Pieces/Reel (optional)



**Edition 2009-11-16**

**Published by  
Infineon Technologies AG  
81726 Munich, Germany**

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