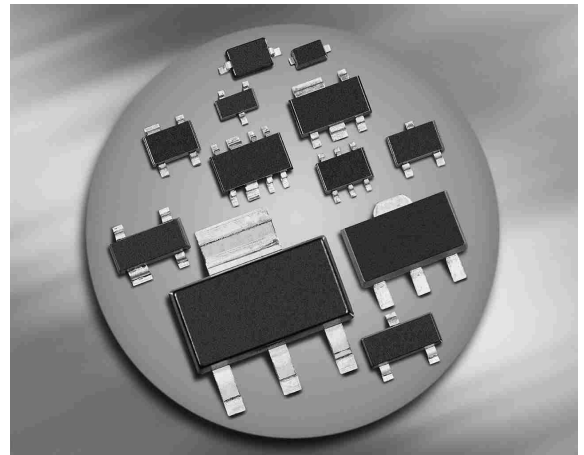
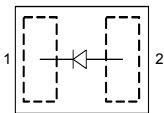


**Low VF Schottky Diode**

- Reverse voltage: 30 V
- Forward current: 1 A
- Low forward voltage and smallest package form factor (1.0 x 0.6 x < 4 mm) for mobile phone battery charger application
- Pb-free (RoHS compliant) package


**BAS3010S-02LRH**


| Type           | Package   | Configuration | Marking |
|----------------|-----------|---------------|---------|
| BAS3010S-02LRH | TSLP-2-17 | single        | 1T      |

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

| Parameter                                                             | Symbol    | Value       | Unit |
|-----------------------------------------------------------------------|-----------|-------------|------|
| Diode reverse voltage <sup>1)</sup>                                   | $V_R$     | 30          | V    |
| Forward current <sup>1)</sup> , $T_S \leq 114\text{ °C}$              | $I_F$     | 1           | A    |
| Non-repetitive peak surge forward current ( $t_p \leq 10\text{ ms}$ ) | $I_{FSM}$ | 4           |      |
| 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 |
|------------------------------------------|------------|-----------|-----|

<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

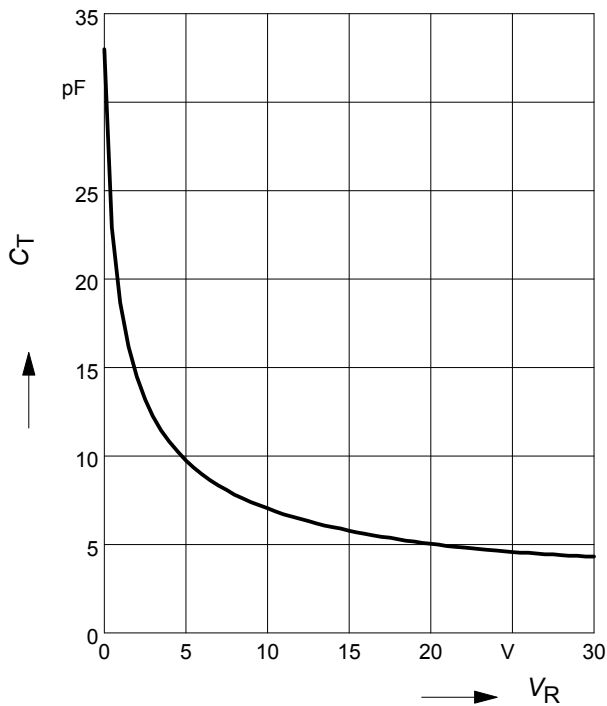
**Electrical Characteristics** at  $T_A = 25^\circ\text{C}$ , unless otherwise specified

| Parameter                            | Symbol | Values |      |      | Unit          |
|--------------------------------------|--------|--------|------|------|---------------|
|                                      |        | min.   | typ. | max. |               |
| DC Characteristics                   |        |        |      |      |               |
| Reverse current <sup>1)</sup>        | $I_R$  |        |      |      | $\mu\text{A}$ |
| $V_R = 10\text{ V}$                  |        | -      | -    | 30   |               |
| $V_R = 30\text{ V}$                  |        | -      | -    | 300  |               |
| Forward voltage <sup>1)</sup>        | $V_F$  |        |      |      | $\text{mV}$   |
| $I_F = 1\text{ mA}$                  |        | -      | 200  | 250  |               |
| $I_F = 100\text{ mA}$                |        | -      | 340  | 390  |               |
| $I_F = 700\text{ mA}$                |        | -      | 500  | 570  |               |
| $I_F = 1000\text{ mA}$               |        | -      | 570  | 650  |               |
| AC Characteristics                   |        |        |      |      |               |
| Diode capacitance                    | $C_T$  | -      | 10   | 15   | $\text{pF}$   |
| $V_R = 5\text{ V}, f = 1\text{ MHz}$ |        |        |      |      |               |

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

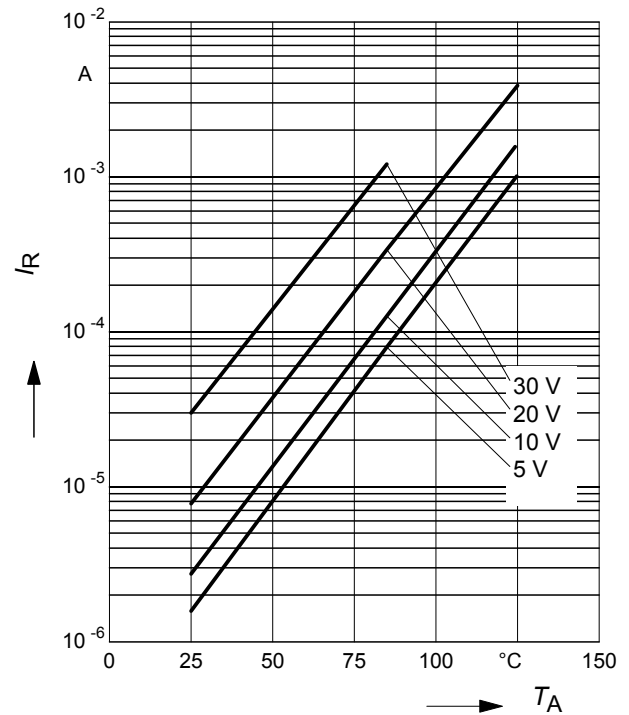
**Diode capacitance  $C_T = f(V_R)$**

$f = 1\text{MHz}$



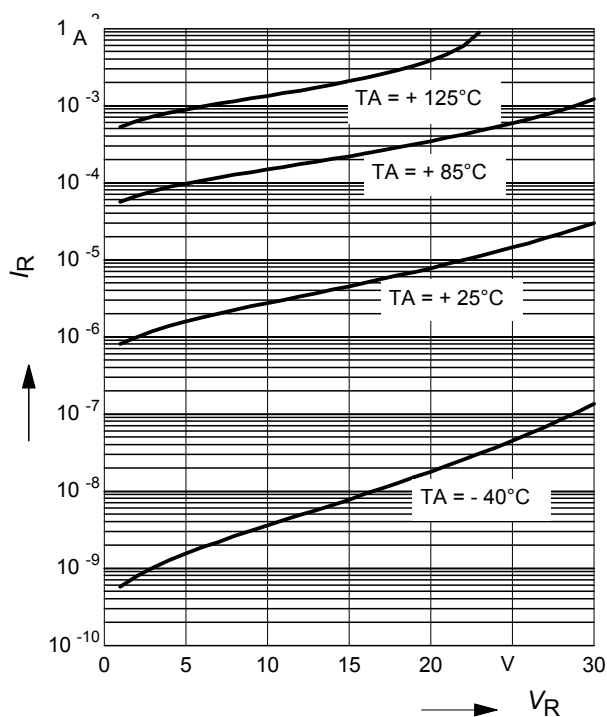
**Reverse current  $I_R = f(T_A)$**

$V_R = \text{Parameter}$



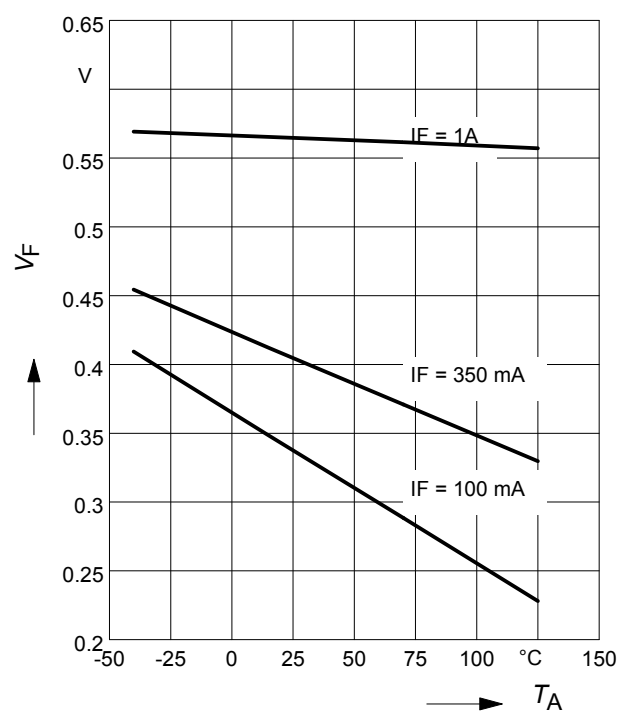
**Reverse current  $I_R = f(V_R)$**

$T_A = \text{Parameter}$

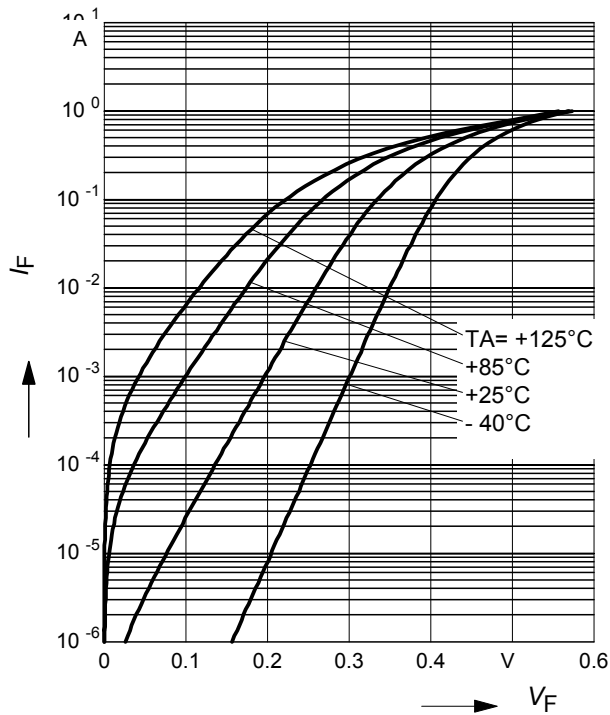


**Forward Voltage  $V_F = f(T_A)$**

$I_F = \text{Parameter}$



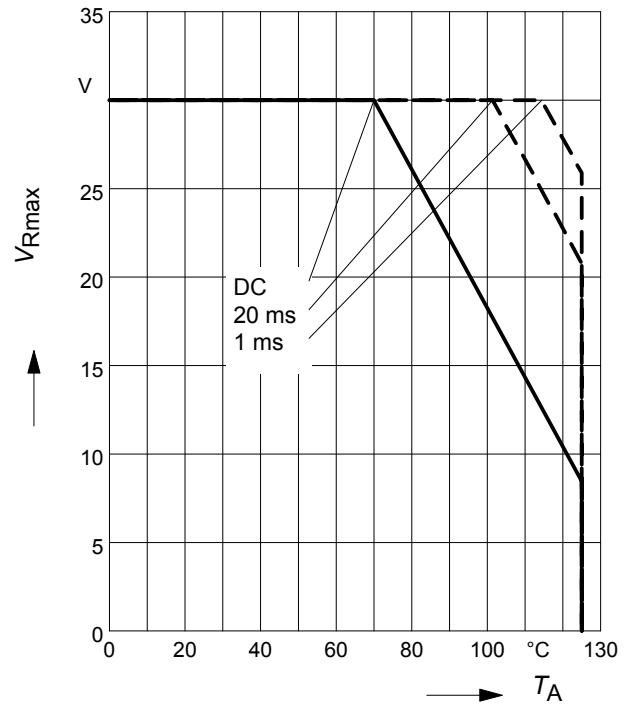
**Forward current  $I_F = f(V_F)$**



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

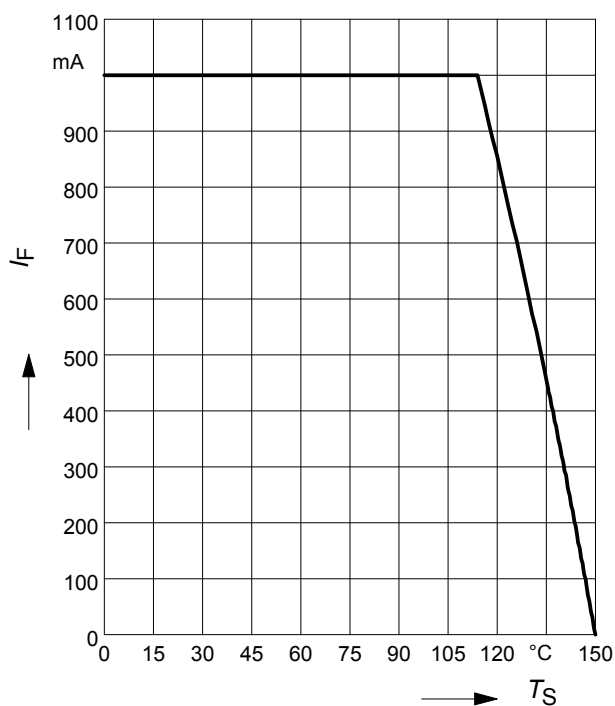
$t_p$  = Parameter, Duty cycle  $< 0.01$

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

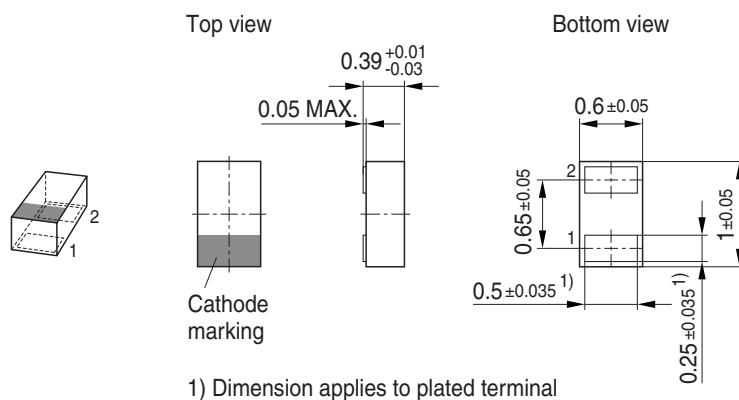


**Forward current  $I_F = f(T_S)$**

BAS3010S-02LRH

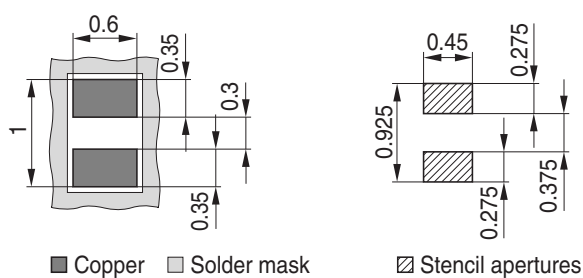


## Package Outline

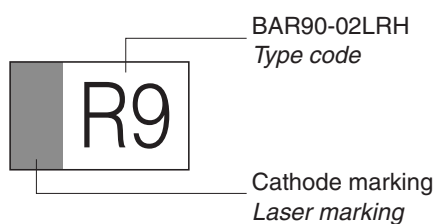


## Foot Print

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



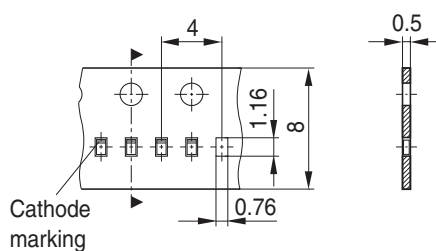
## Marking Layout (Example)



## 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**

**© 2009 Infineon Technologies AG  
All Rights Reserved.**

### **Legal Disclaimer**

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. 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 the nearest Infineon Technologies Office ([<www.infineon.com>](http://www.infineon.com)).

### **Warnings**

Due to technical requirements, components may contain dangerous substances. For information on the types in question, please contact the nearest Infineon Technologies Office.

Infineon Technologies components may be used in life-support devices or systems only 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.

## Данный компонент на территории Российской Федерации

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9