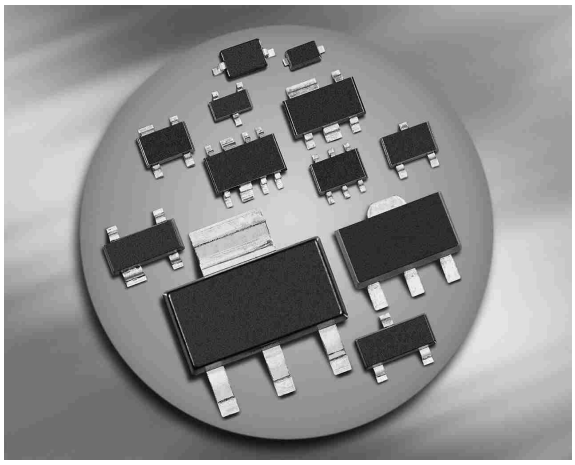
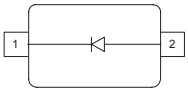
Medium Power AF Schottky Diode

- Forward current: 0.5 A
- Reverse voltage: 30 V
- Low capacitance, low reverse current
- For high efficiency DC/DC conversion, fast switching, protecting and clamping applications
- Pb-free (RoHS compliant) package
- Qualified according AEC Q101



AEC Qualified RoHS

BAS3005B-02LRH*
BAS3005B-02V



Type	Package	Configuration	Marking
BAS3005B-02LRH*	TSLP-2-17	single, leadless	5B
BAS3005B-02V	SC79	single	3

*Preliminary

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

Parameter	Symbol	Value	Unit
Diode reverse voltage[1)]	V_R	30	V
RMS reverse voltage	$V_{R(RMS)}$	-	
Forward current[1)]	I_F	500	mA
Average rectified forward current (50/60Hz, sinus)	I_{FAV}	500	
Repetitive peak forward current ($t_p \leq 1$ ms, $D \leq 0.25$)	I_{FRM}	3.5	A
Non-repetitive peak surge forward current ($t \leq 10$ms)	I_{FSM}	5	
Junction temperature	T_j	150	°C
Operating temperature range	T_{op}	-55 ...125	
Storage temperature	T_{stg}	-65 ...150	

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

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point[1)]	R_{thJS}	≤ 80	K/W

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

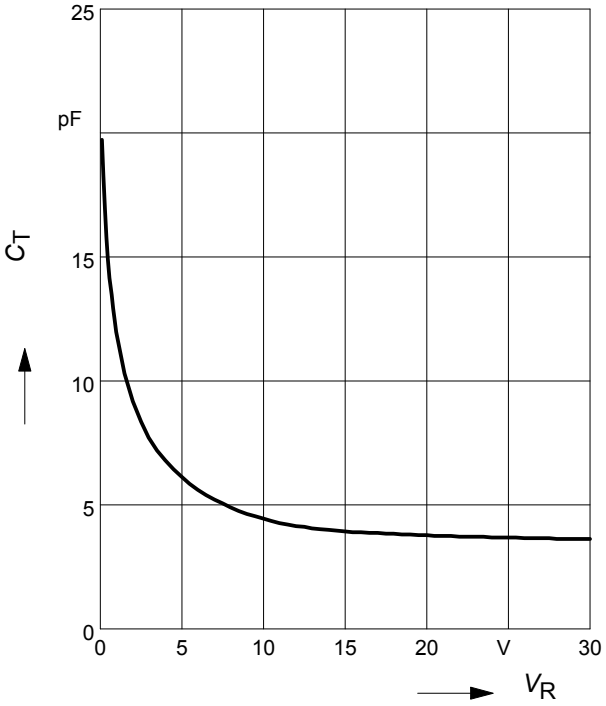
Electrical Characteristics at T_A = 25°C, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Reverse current[1)]	I_R				µA
V_R = 5 V		-	1	5	
V_R = 10 V		-	2	10	
V_R = 30 V		-	5	25	
Forward voltage[1)]	V_F				mV
I_F = 1 mA		-	200	250	
I_F = 10 mA		-	260	310	
I_F = 100 mA		-	360	410	
I_F = 200 mA		-	410	470	
I_F = 500 mA		-	550	620	
AC Characteristics					
Diode capacitance	C_T	-	6	10	pF
V_R = 5 V, f = 1 MHz					

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

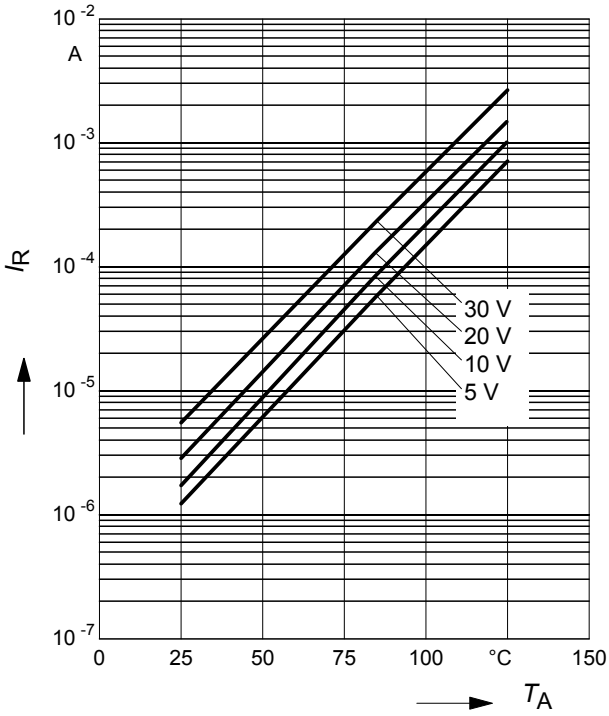
Diode capacitance $C_T = f(V_R)$

f = 1MHz



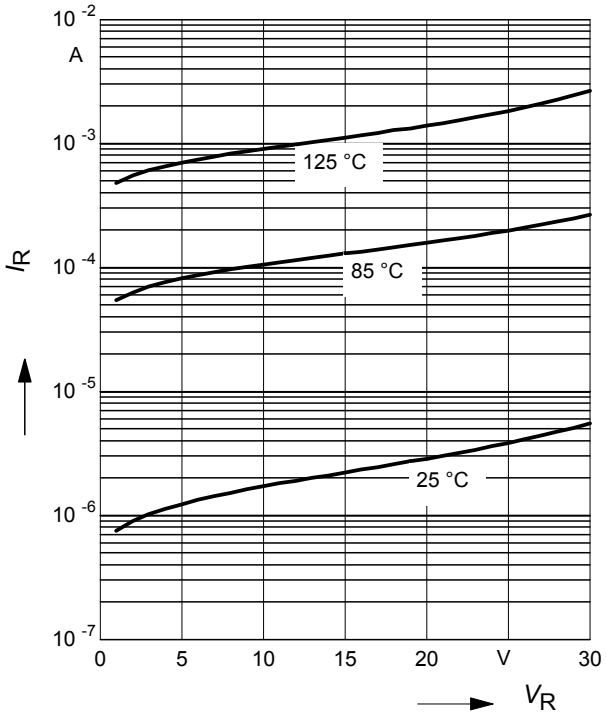
Reverse current $I_R = f(T_A)$

V_R = Parameter



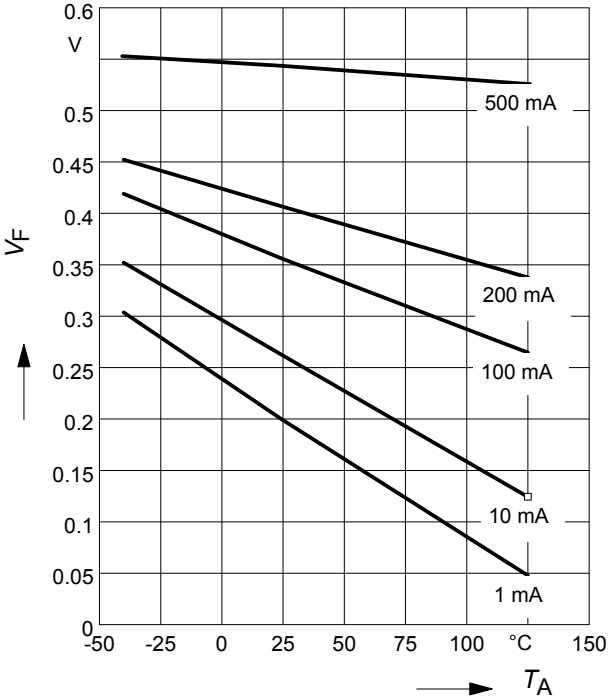
Reverse current $I_R = f(V_R)$

T_A = Parameter



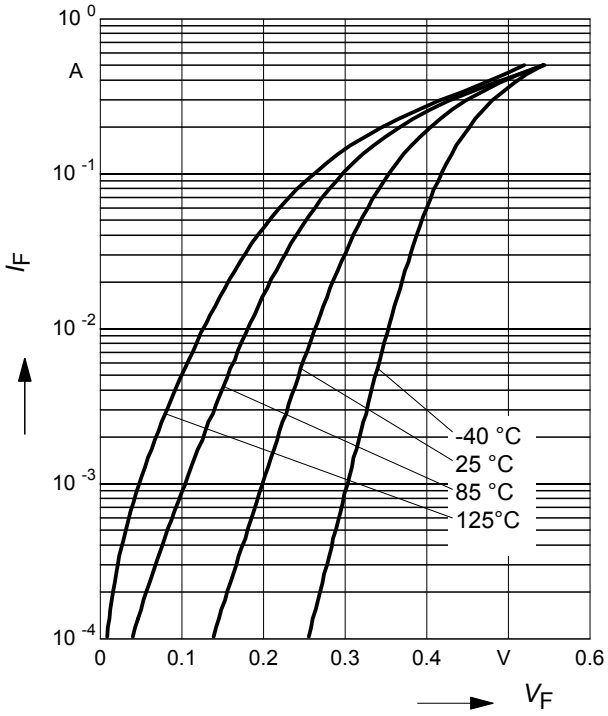
Forward Voltage $V_F = f(T_A)$

I_F = Parameter



Forward current $I_F = f(V_F)$

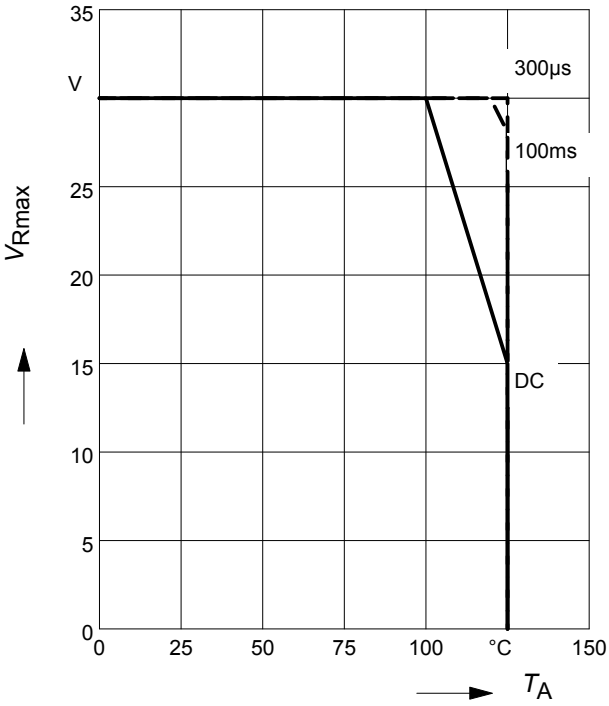
T_A = Parameter



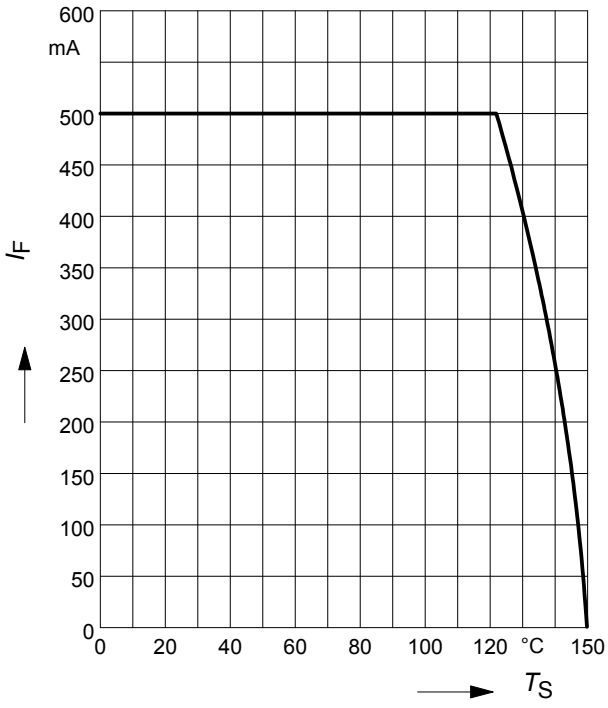
Permissible Reverse voltage $V_R = f(T_A)$

t_p = Parameter, Duty cycle < 0.01

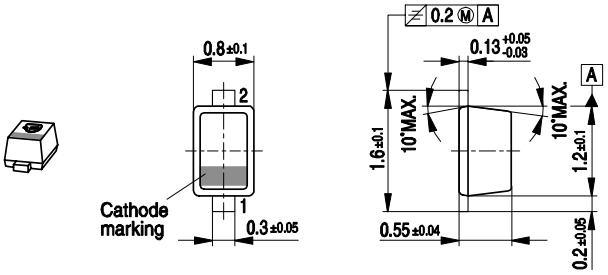
Device mounted on PCB with R_{th} = 160 k/W



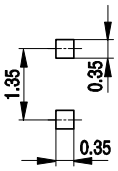
Forward current $I_F = f(T_S)$



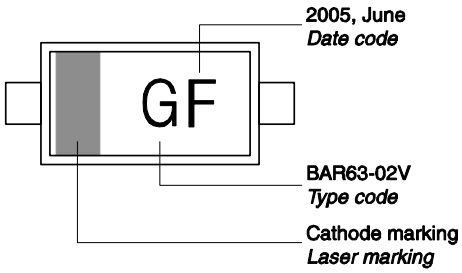
Package Outline



Foot Print

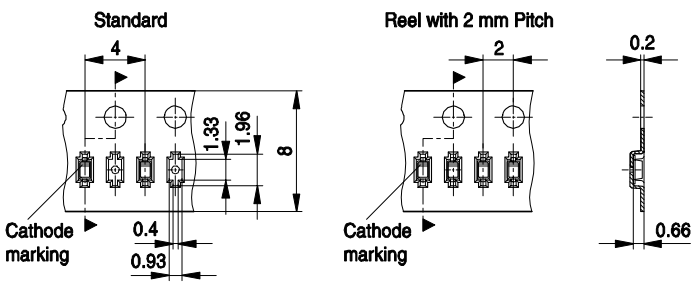


Marking Layout (Example)



Standard Packing

Reel ø180 mm = 3.000 Pieces/Reel
Reel ø180 mm = 8.000 Pieces/Reel (2 mm Pitch)
Reel ø330 mm = 10.000 Pieces/Reel

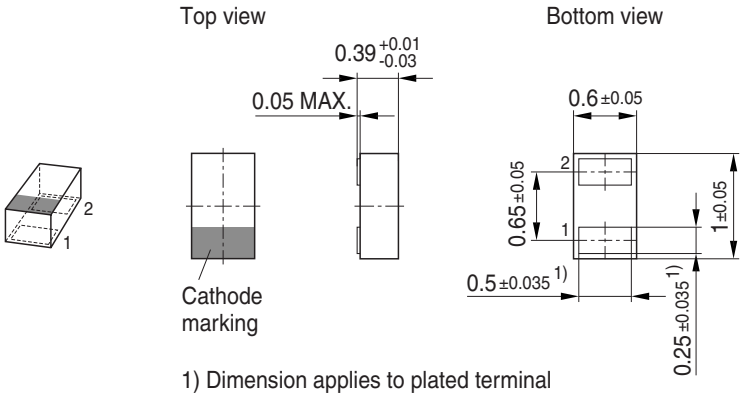


Date Code marking for discrete packages with one digit (SCD80, SC79, SC75[1)]) CES-Code

Month	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
01	a	p	A	P	a	p	A	P	a	p	A	P
02	b	q	B	Q	b	q	B	Q	b	q	B	Q
03	c	r	C	R	c	r	C	R	c	r	C	R
04	d	s	D	S	d	s	D	S	d	s	D	S
05	e	t	E	T	e	t	E	T	e	t	E	T
06	f	u	F	U	f	u	F	U	f	u	F	U
07	g	v	G	V	g	v	G	V	g	v	G	V
08	h	x	H	X	h	x	H	X	h	x	H	X
09	j	y	J	Y	j	y	J	Y	j	y	J	Y
10	k	z	K	Z	k	z	K	Z	k	z	K	Z
11	l	2	L	4	l	2	L	4	l	2	L	4
12	n	3	N	5	n	3	N	5	n	3	N	5

1) New Marking Layout for SC75, implemented at October 2005.

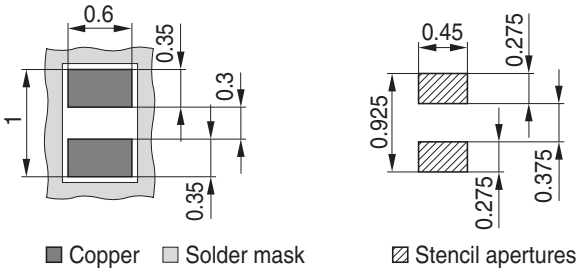
Package Outline



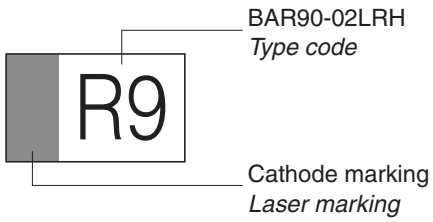
1) Dimension applies to plated terminal

Foot Print

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

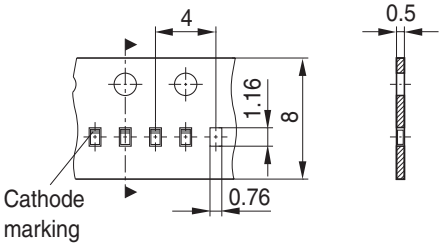


Marking Layout (Example)



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

© 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>).

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.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Infineon:

BAS3005B02VH6327XTSA1