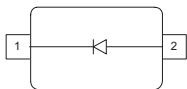


Silicon Schottky Diode

- Medium current rectifier Schottky diode
- Low forward voltage at 200mA
- High reverse voltage
- Pb-free (RoHS compliant) package¹⁾
- Qualified according AEC Q101



BAS52-02V



ESD (Electrostatic discharge) sensitive device, observe handling precaution!

Type	Package	Configuration	Marking
BAS52-02V	SC79	single	y

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

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	45	V
Forward current	I_F	750	mA
Average rectified forward current (50/60Hz, sinus)	I_{FAV}	500	mA
Non-repetitive peak surge forward current $t = 100 \mu\text{s}$	I_{FSM}	2000	
Total power dissipation $T_S \leq 110^\circ\text{C}$	P_{tot}	500	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-65 ... 150	

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point ²⁾	R_{thJS}	≤ 60	K/W

¹⁾Pb-containing package may be available upon special request

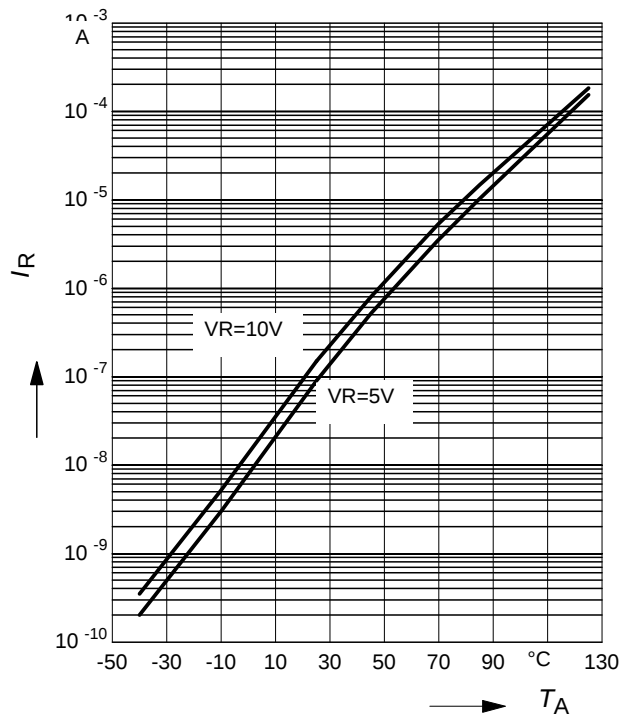
²⁾For calculation of R_{thJA} please refer to Application Note Thermal Resistance

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Reverse current	I_R				μA
$V_R = 45\text{ V}$		-	-	10	
$V_R = 5\text{ V}, T_A = 70\text{ }^{\circ}\text{C}$		-	-	30	
$V_R = 10\text{ V}$		-	-	1	
$V_R = 10\text{ V}, T_A = 85\text{ }^{\circ}\text{C}$		-	-	80	
Forward voltage	V_F				mV
$I_F = 10\text{ mA}$		-	335	420	
$I_F = 100\text{ mA}$		-	430	530	
$I_F = 200\text{ mA}$		400	500	600	
AC Characteristics					
Diode capacitance	C_T	-	5	10	pF
$V_R = 10\text{ V}, f = 1\text{ MHz}$					

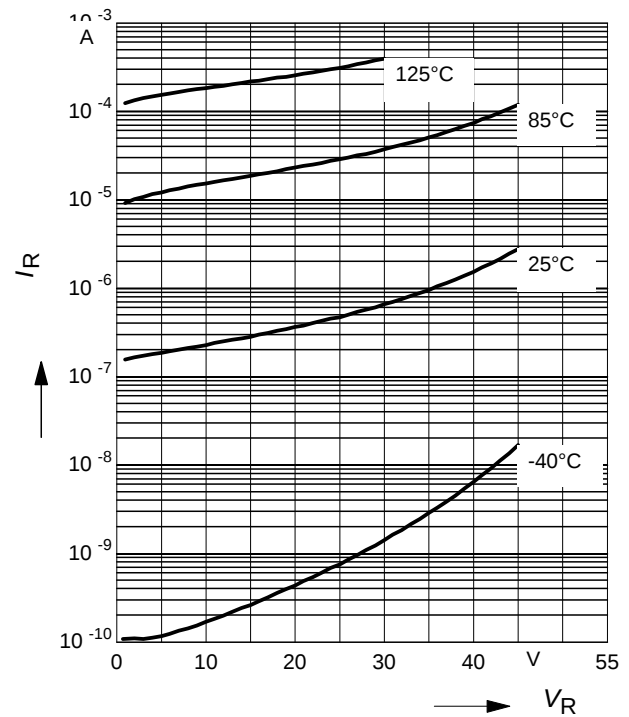
Reverse current $I_R = f(T_A)$

V_R = Parameter



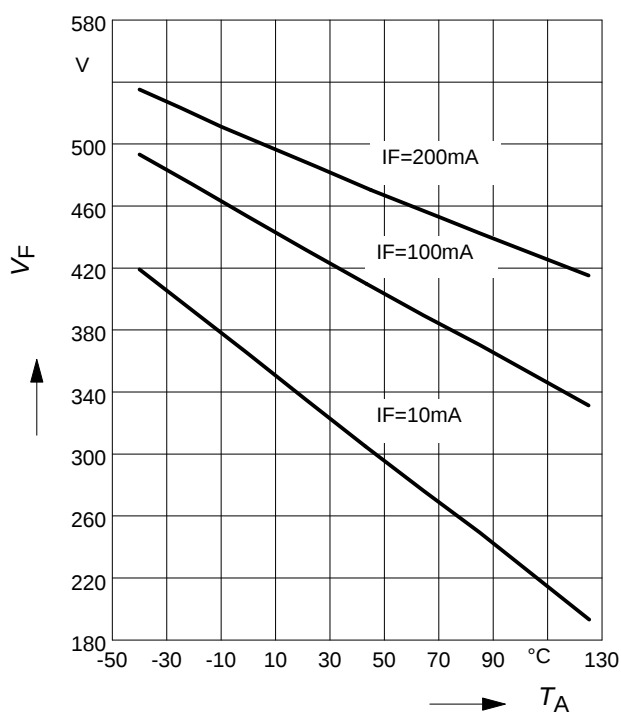
Reverse current $I_R = f(V_R)$

T_A = Parameter



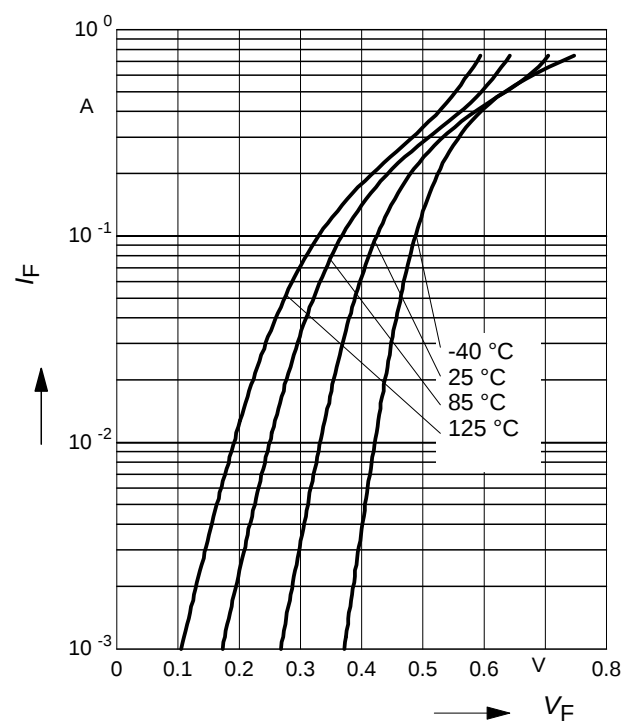
Forward Voltage $V_F = f(T_A)$

I_F = Parameter



Forward current $I_F = f(V_F)$

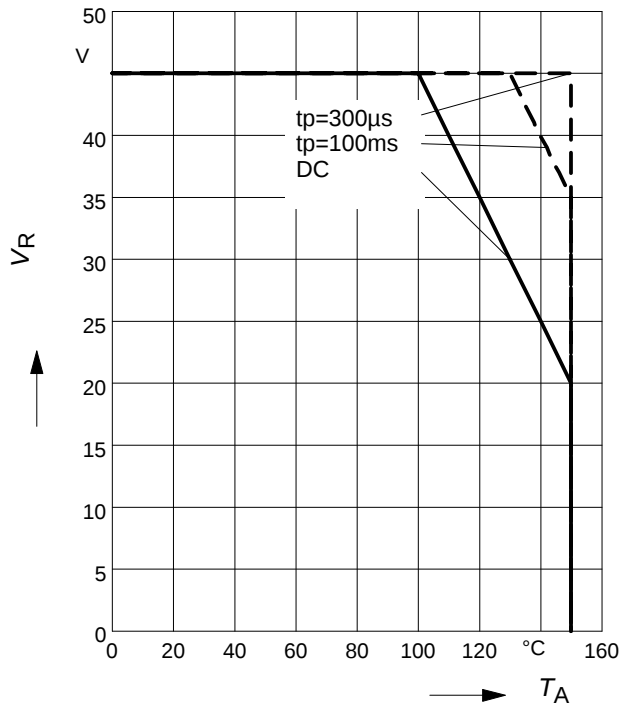
T_A = Parameter



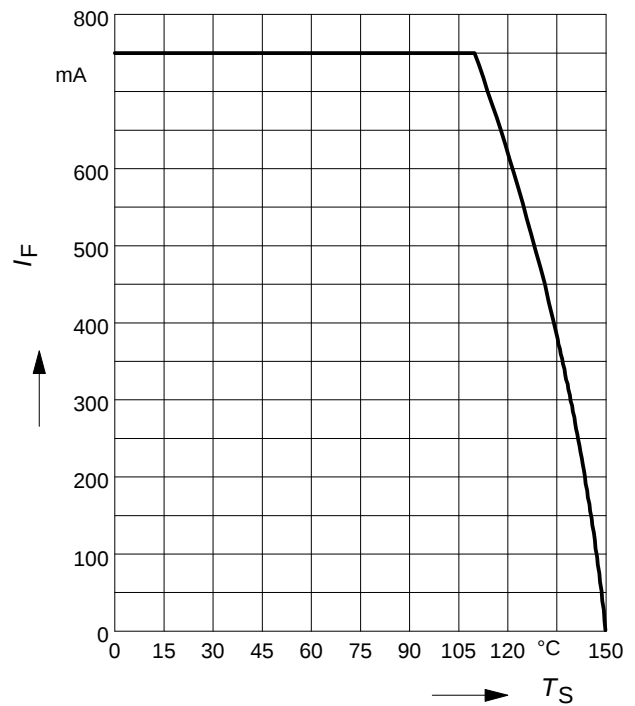
Permissible Reverse voltage $V_R = f(T_A)$

t_p = Parameter

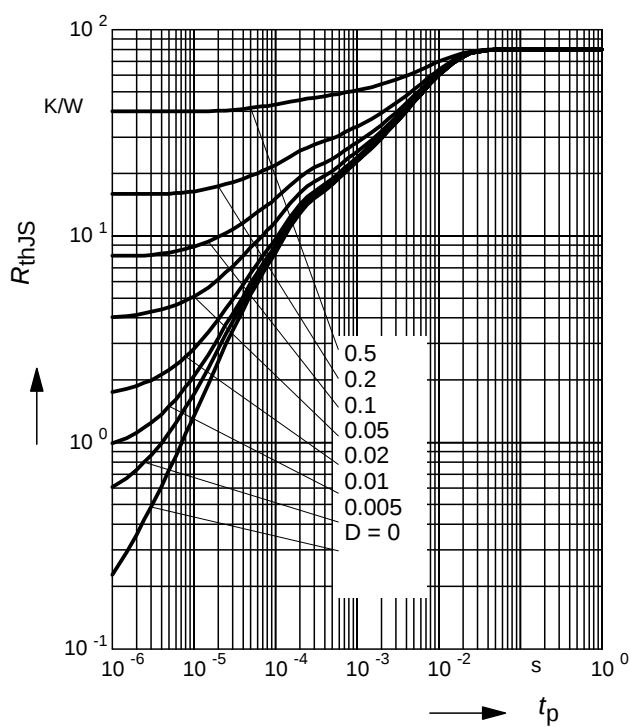
Duty cycle < 0.01



Forward current $I_F = f(T_S)$

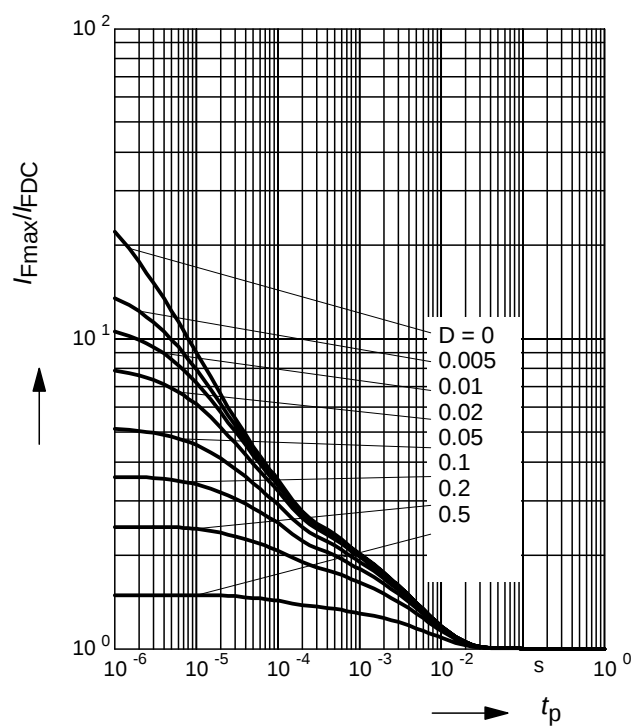


Permissible Puls Load $R_{thJS} = f(t_p)$

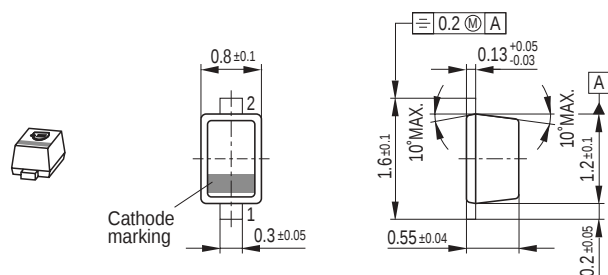


Permissible Pulse Load

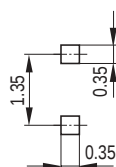
$$I_{Fmax}/I_{FDC} = f(t_p)$$



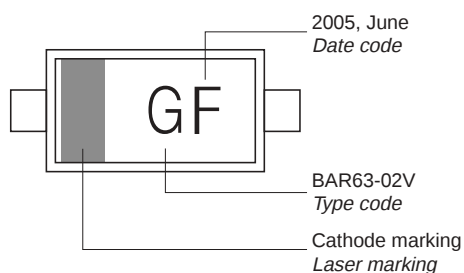
Package Outline



Foot Print

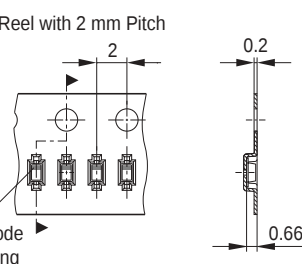
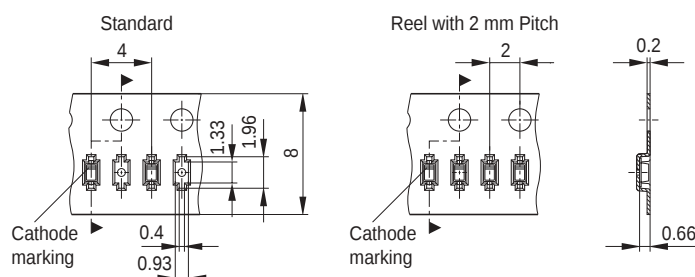


Marking Layout (Example)



Standard Packing

Reel $\varnothing 180$ mm = 3.000 Pieces/Reel
 Reel $\varnothing 180$ mm = 8.000 Pieces/Reel (2 mm Pitch)
 Reel $\varnothing 330$ mm = 10.000 Pieces/Reel



Date Code marking for discrete packages with one digit (SCD80, SC79, SC75¹⁾) 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.

Edition 2006-02-01

Published by

Infineon Technologies AG

81726 München, Germany

© Infineon Technologies AG 2007.

All Rights Reserved.

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.