## Silicon Schottky Diode

- Medium current rectifier Schottky diode

- Low forward voltage at 200mA

- High reverse voltage

- Pb-free (RoHS compliant) package[1]

- Qualified according AEC Q101

AEC Qualified

RoHS
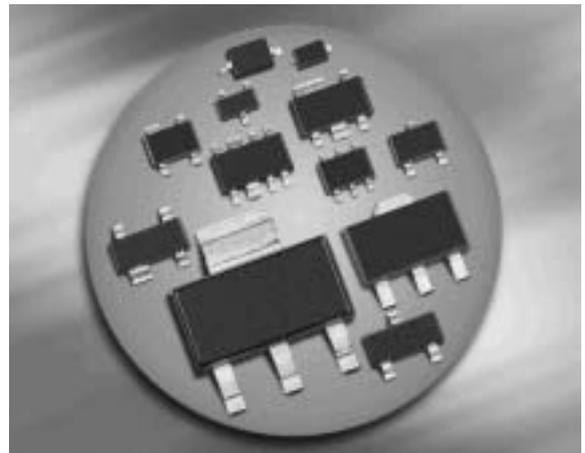
BAS52-02V

ESD (**E**lectro**s**tatic **d**ischarge) sensitive device, observe handling precaution!

Type	Package	Configuration	Marking
BAS52-02V	SC79	single	y

Maximum Ratings at T_A = 25°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 µs	I_{FSM}	2000	
Total power dissipation $T_S \leq 110$°C	P_{tot}	500	mW
Junction temperature	T_j	150	°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

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

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

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

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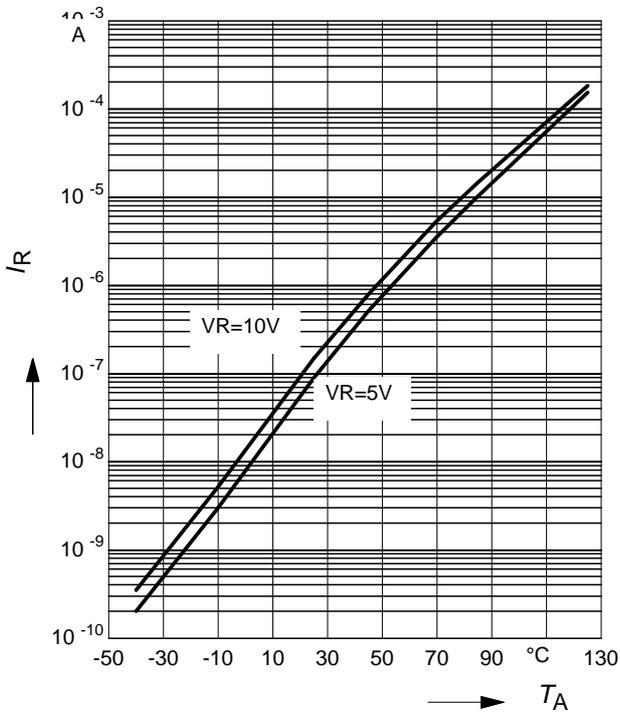
Reverse current $I_R = f(V_R)$

T_A = Parameter
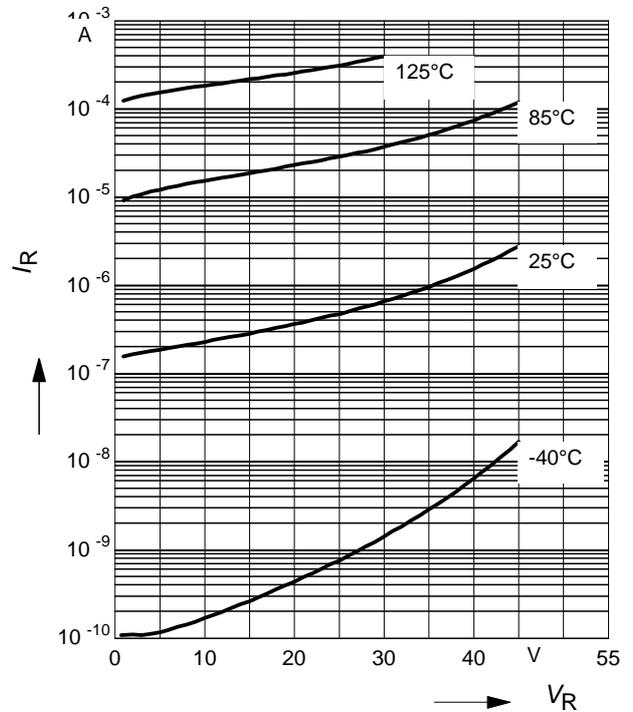

Forward Voltage $V_F = f(T_A)$

I_F = Parameter
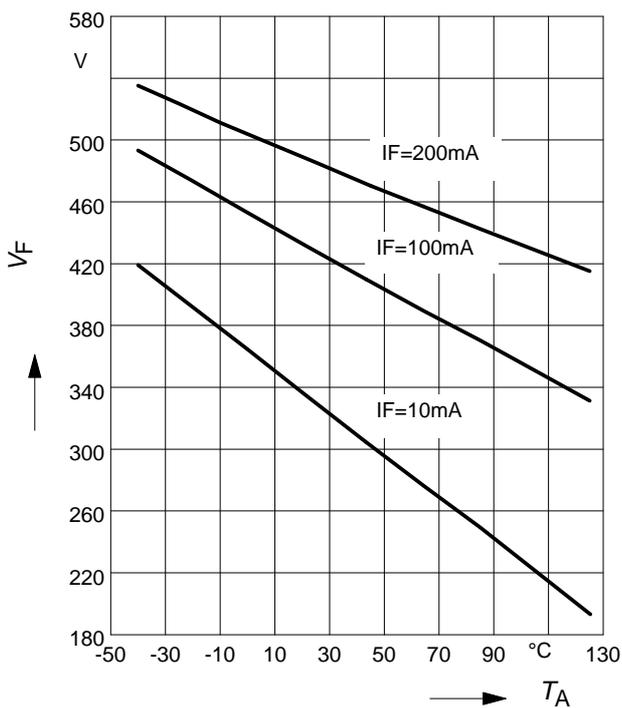

Forward current $I_F = f(V_F)$

T_A = Parameter

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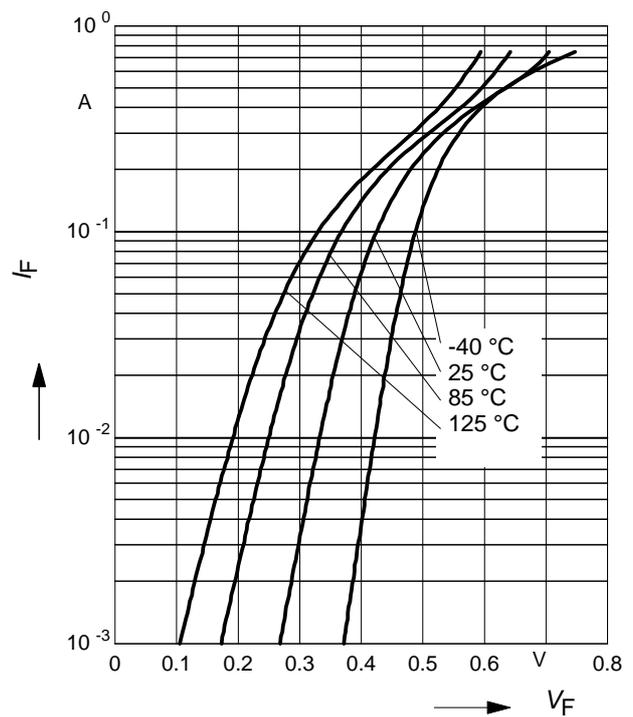
Permissible Reverse voltage $V_R = f(T_A)$

t_p = Parameter

Duty cycle < 0.01
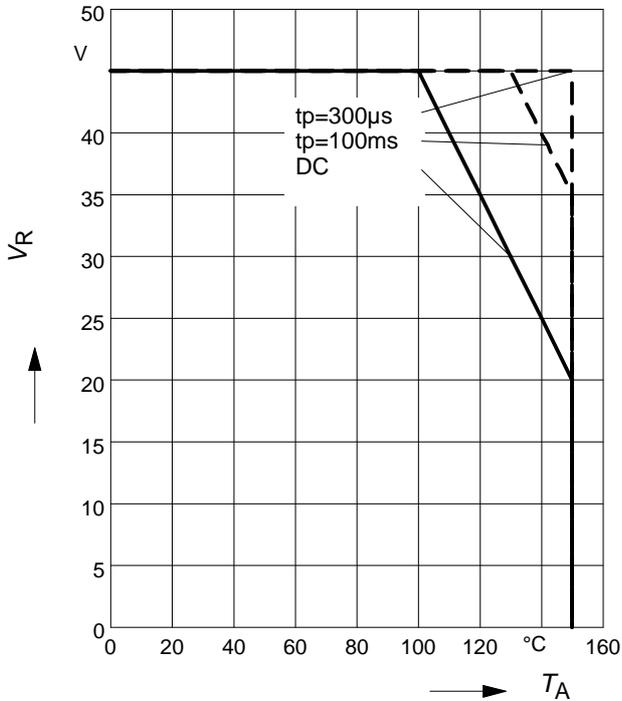

Forward current $I_F = f(T_S)$
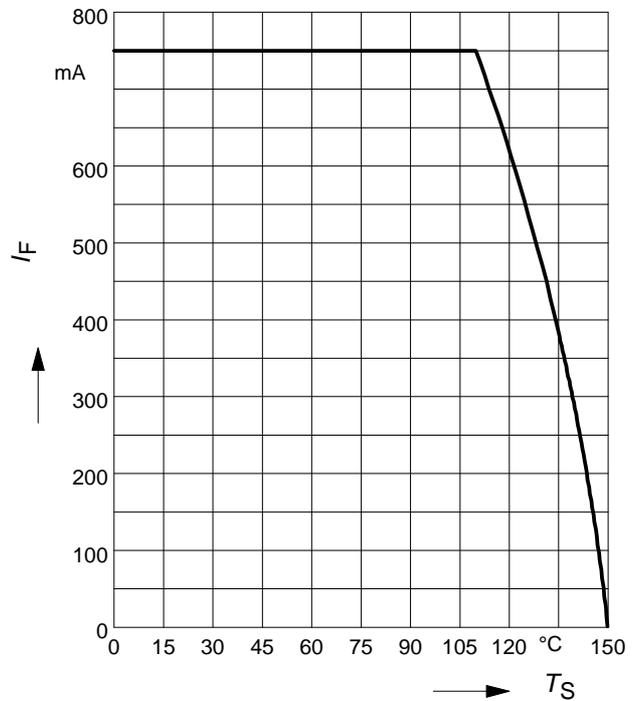
Permissible Puls Load $R_{thJS} = f(t_p)$
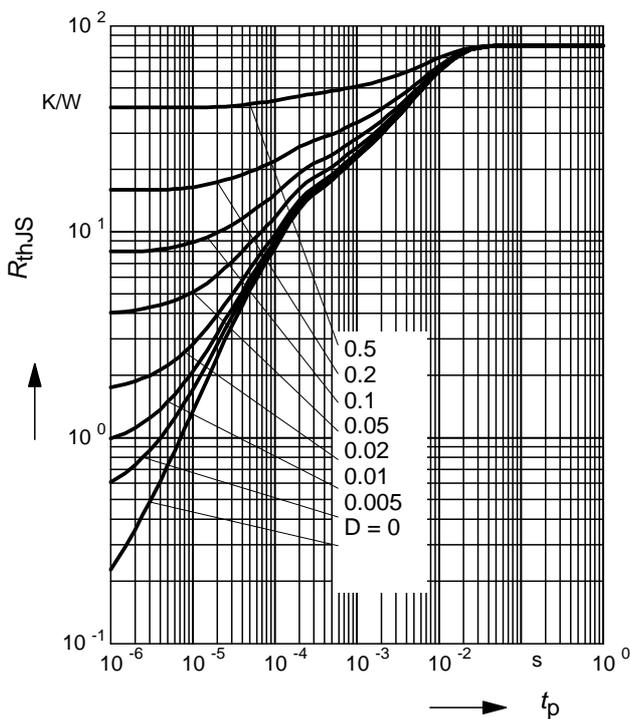
Permissible Pulse Load

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

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Package Outline

0.8 ±0.1

2

Cathode
marking

0.3 ±0.05

$\boxed{\equiv \, 0.2 \, \text{Ⓜ} \, A}$

$0.13 {}^{+0.05}_{-0.03}$

1.6 ±0.1

10° MAX.

10° MAX.

$\boxed{A}$

1.2 ±0.1

0.55 ±0.04

0.2 ±0.05

1

Foot Print

1.35

0.35

0.35

Marking Layout (Example)

2005, June
Date code

GF

BAR63-02V
Type code
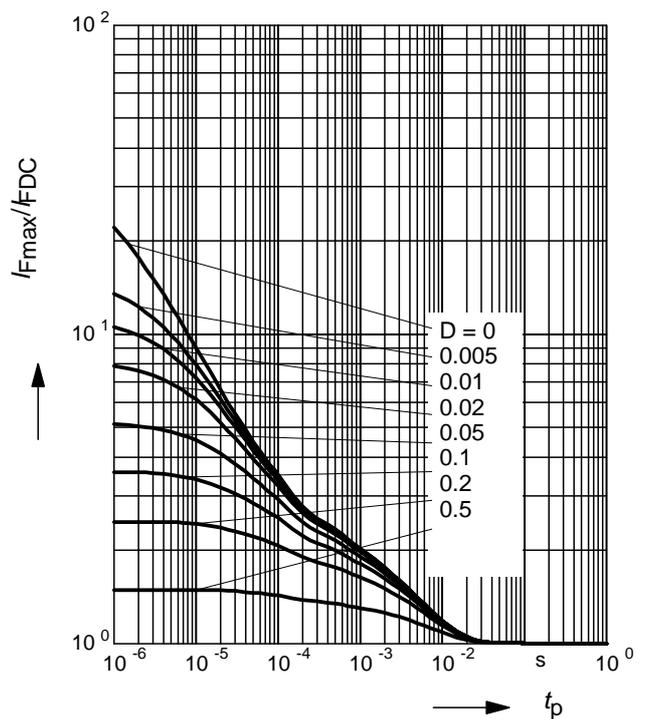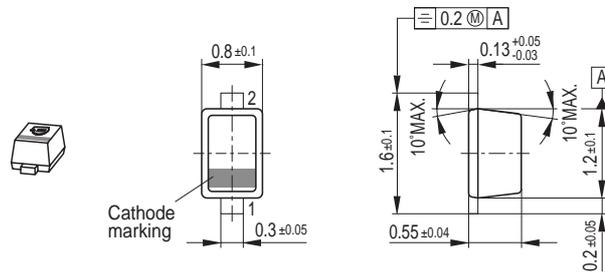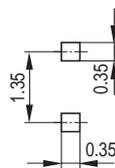
Cathode marking
Laser marking
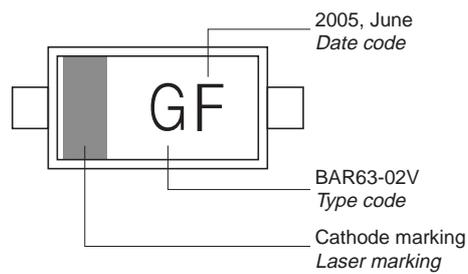
Standard Packing

Reel ⌀180 mm = 3.000 Pieces/Reel
Reel ⌀180 mm = 8.000 Pieces/Reel (2 mm Pitch)
Reel ⌀330 mm = 10.000 Pieces/Reel

Standard

4

1.33

1.96

8

Cathode
marking

0.4

0.93

Reel with 2 mm Pitch

2

Cathode
marking

0.2

0.66

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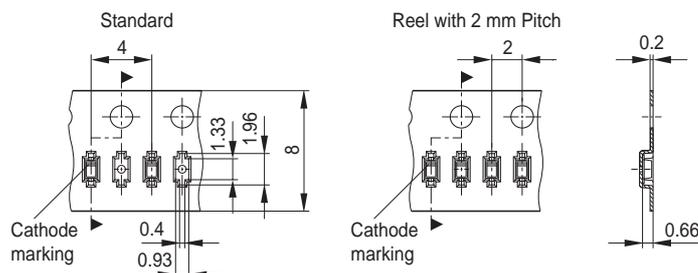
Date Code marking for discrete packages with one digit (SCD80, SC79, SC75[1]) CES-Code

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.

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