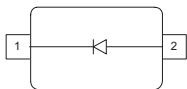


Silicon Schottky Diode

- 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

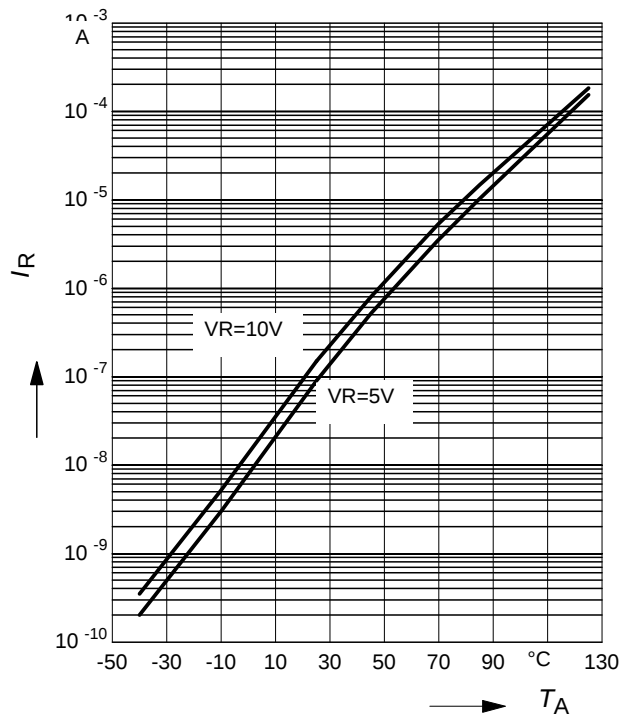
²⁾For calculation of R_{thJA} please refer to Application Note Thermal Resistance

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
$V_R = 10\text{ V}, f = 1\text{ MHz}$					

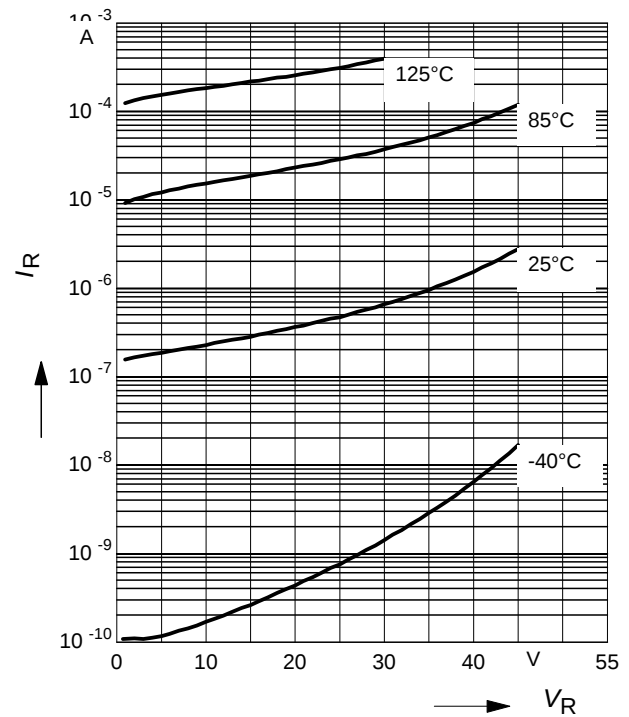
Reverse current $I_R = f(T_A)$

V_R = Parameter



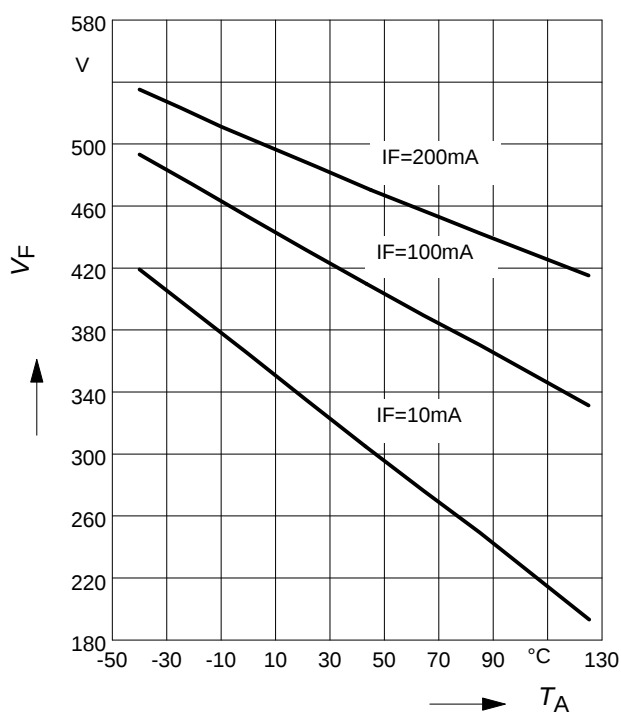
Reverse current $I_R = f(V_R)$

T_A = Parameter



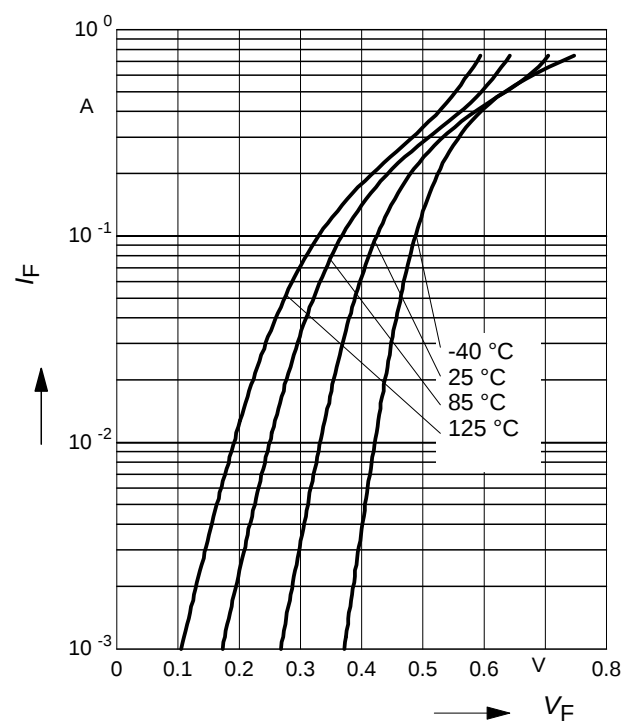
Forward Voltage $V_F = f(T_A)$

I_F = Parameter



Forward current $I_F = f(V_F)$

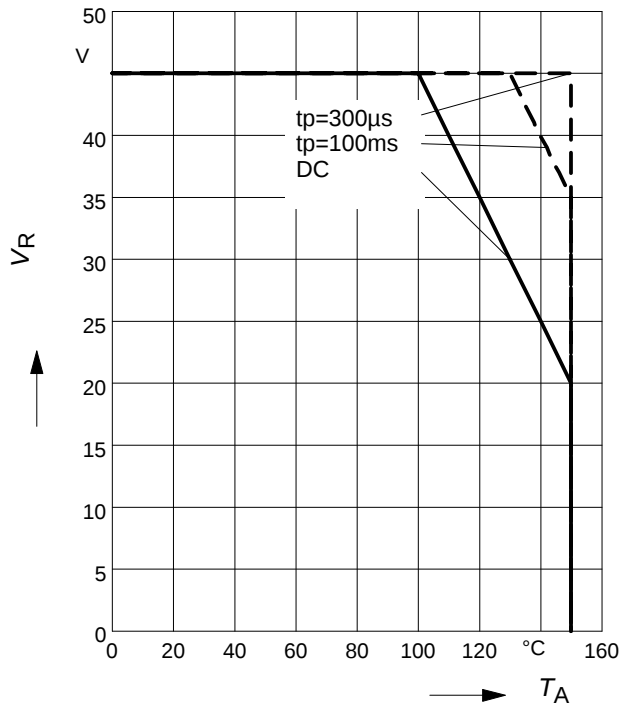
T_A = Parameter



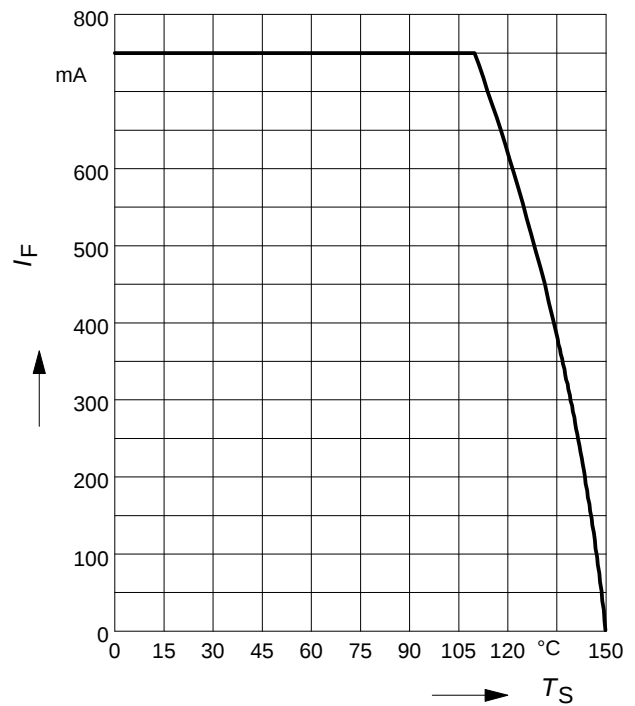
Permissible Reverse voltage $V_R = f(T_A)$

t_p = Parameter

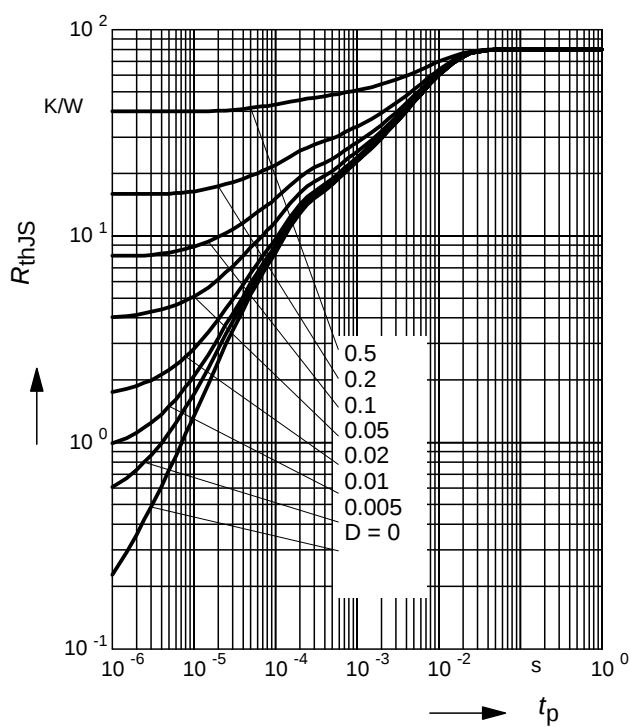
Duty cycle < 0.01



Forward current $I_F = f(T_S)$

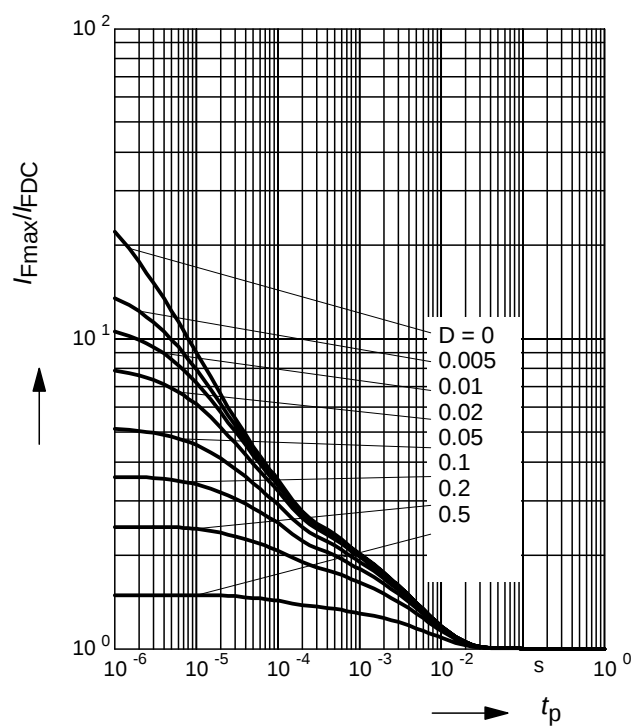


Permissible Puls Load $R_{thJS} = f(t_p)$

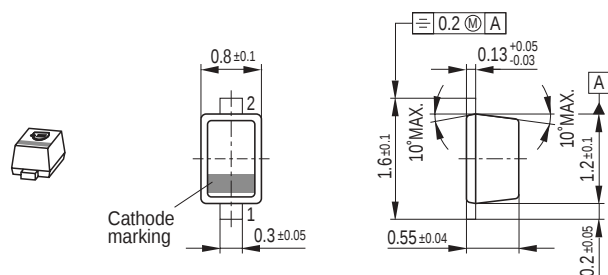


Permissible Pulse Load

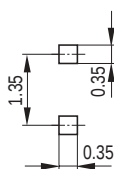
$$I_{Fmax}/I_{FDC} = f(t_p)$$



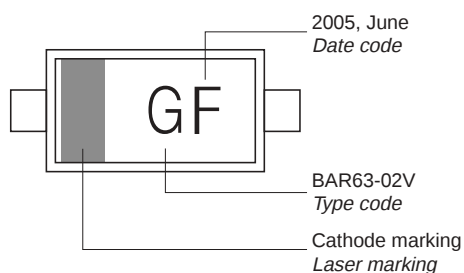
Package Outline



Foot Print

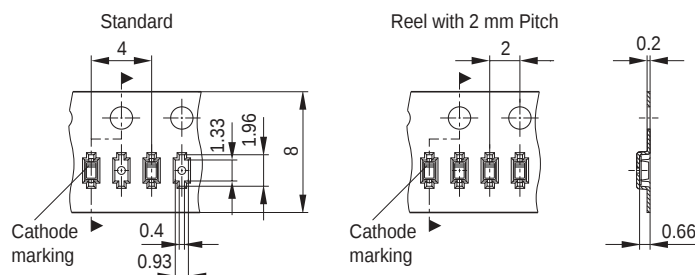


Marking Layout (Example)



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.

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