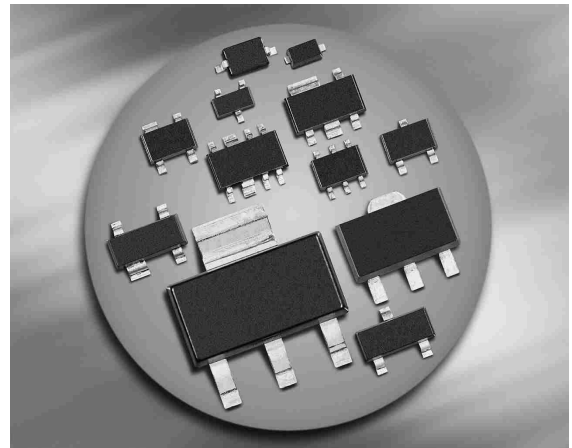
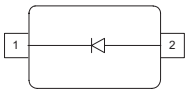


**Silicon Schottky Diode**

- Medium current rectifier Schottky diode
- Low forward voltage at 200mA
- High reverse voltage



**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
Surge forward current (t = 100µs)	$I_{FSM}$	2000	
Average forward current (50/60Hz, sinus)	$I_{FAV}$	500	
Total power dissipation $T_S \leq 110^\circ\text{C}$	$P_{tot}$	500	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-65 ... 150	

**Thermal Resistance**

Parameter	Symbol	Value	Unit
Junction - soldering point <sup>1)</sup>	$R_{thJS}$	≤ 60	K/W

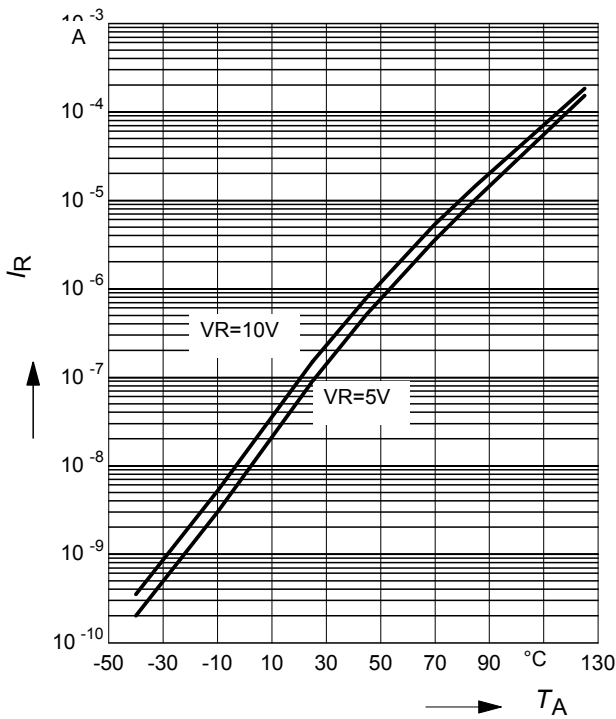
<sup>1</sup>For calculation of  $R_{thJA}$  please refer to Application Note Thermal Resistance

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

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

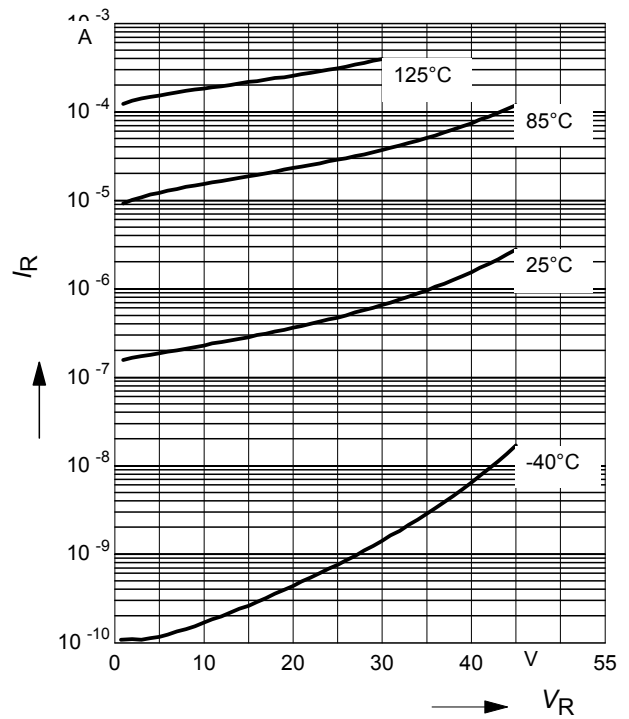
**Reverse current  $I_R = f(T_A)$**

$V_R = \text{Parameter}$



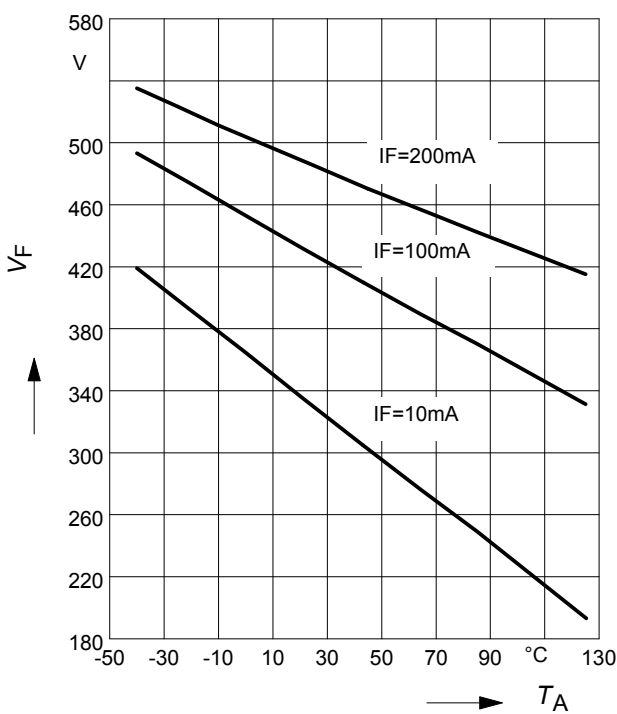
**Reverse current  $I_R = f(V_R)$**

$T_A = \text{Parameter}$



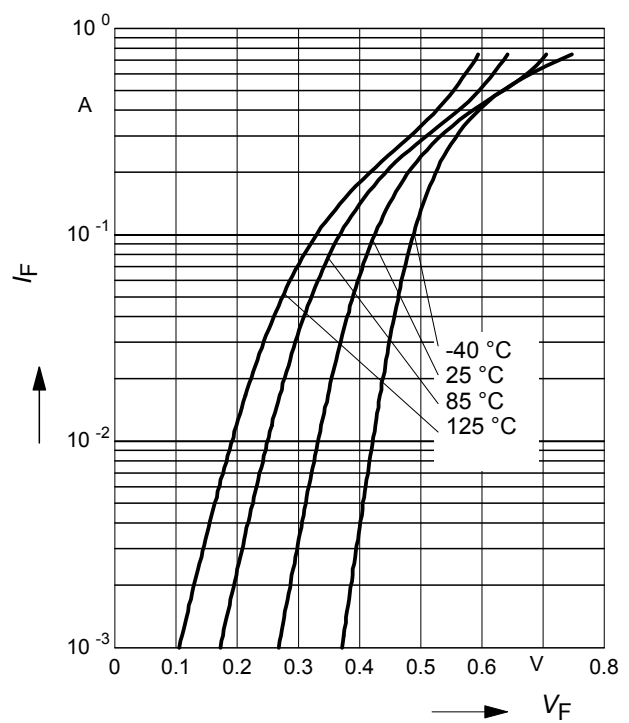
**Forward Voltage  $V_F = f(T_A)$**

$I_F = \text{Parameter}$



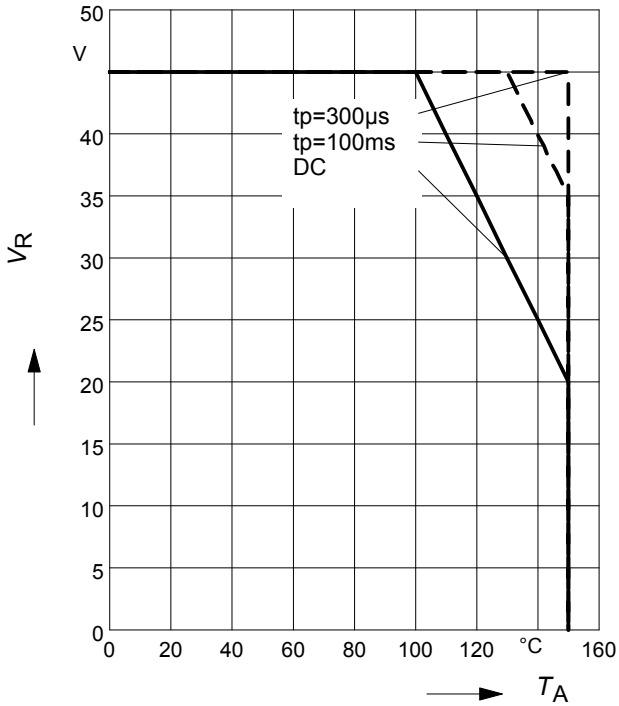
**Forward current  $I_F = f(V_F)$**

$T_A = \text{Parameter}$

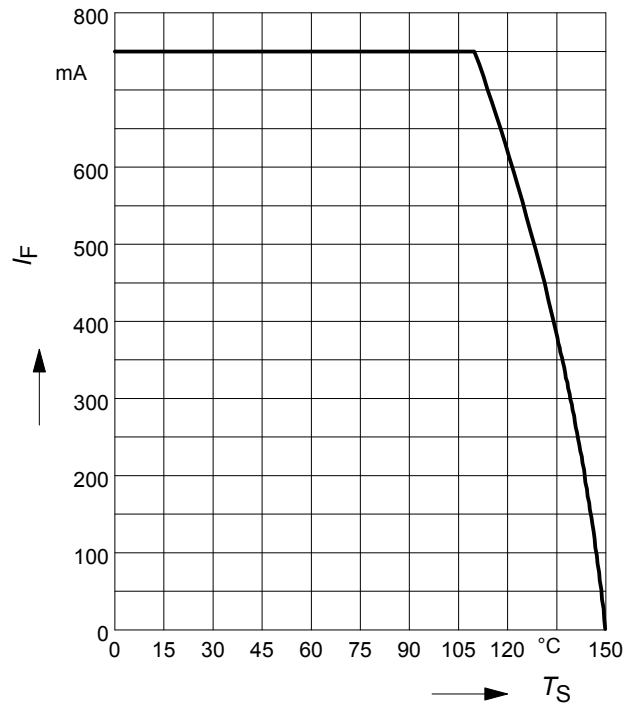


**Permissible Reverse voltage  $V_R = f(T_A)$**

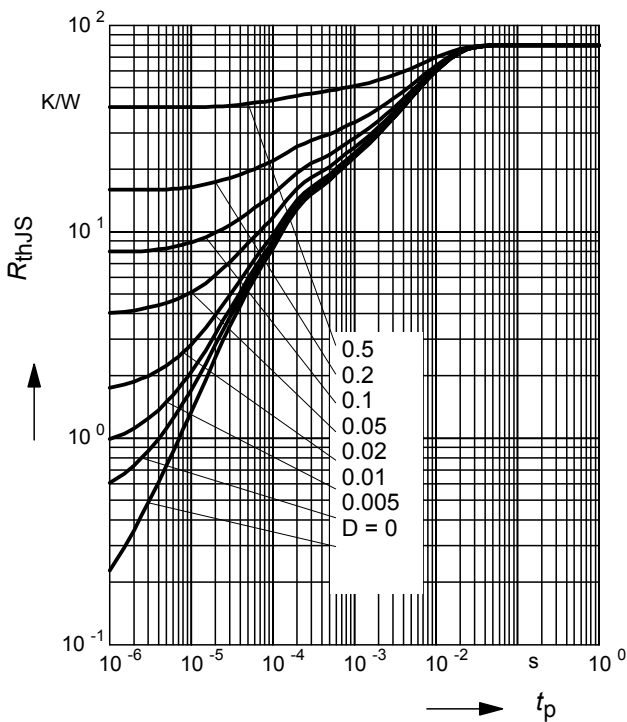
$t_p$  = Parameter  
Duty cycle < 0.01



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



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



**Permissible Pulse Load**

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

