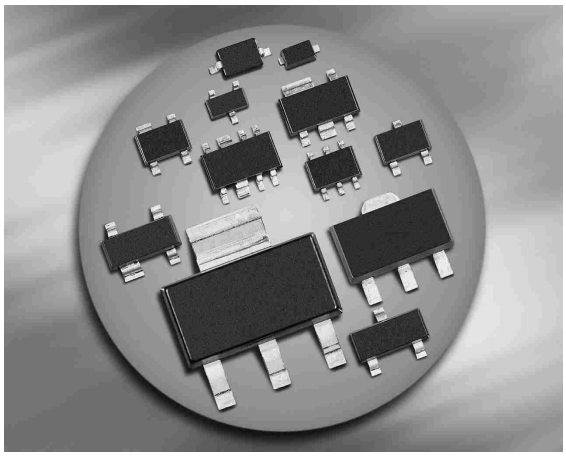
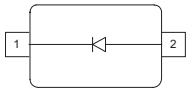
Silicon Schottky Diode

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



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
Surge forward current (t = 100µs)	I_{FSM}	2000	
Average forward current (50/60Hz, sinus)	I_{FAV}	500	
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[1)]	R_{thJS}	≤ 60	K/W

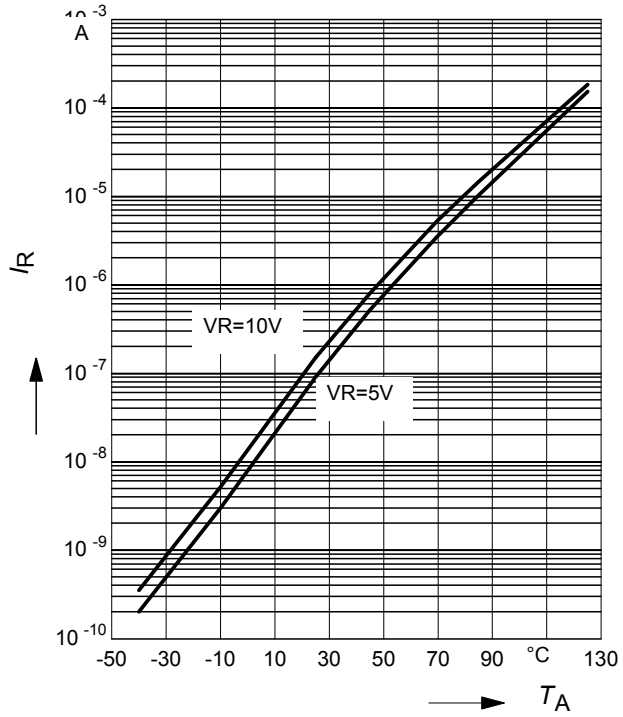
[1]For calculation of R_{thJA} please refer to Application Note Thermal Resistance

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Reverse current	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 V_R = 10 V, f = 1 MHz	C_T	-	5	10	pF

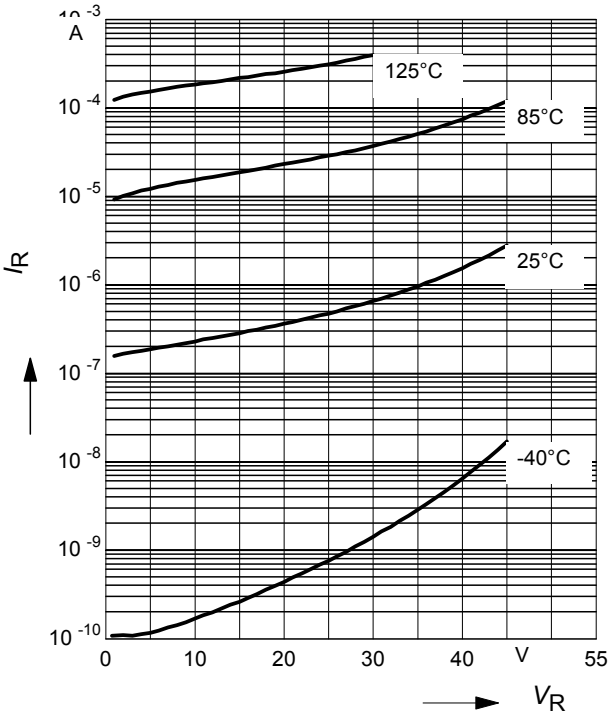
Reverse current $I_R = f(T_A)$

V_R = Parameter



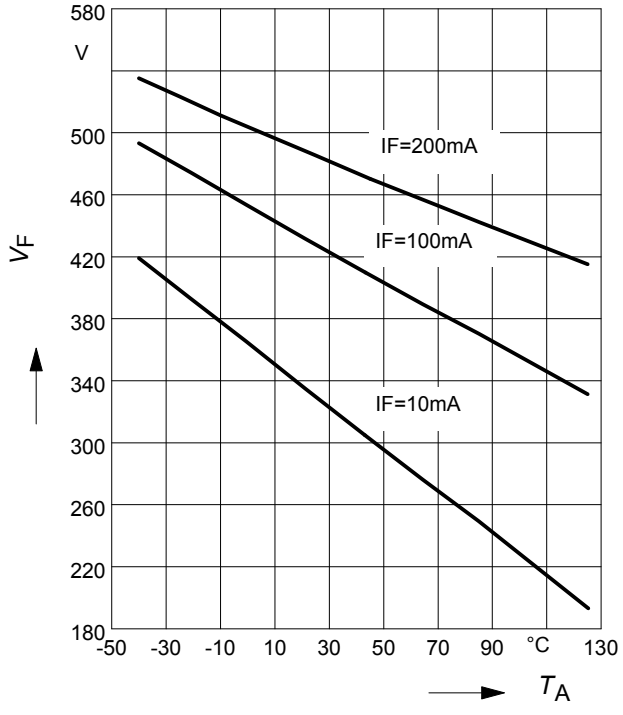
Reverse current $I_R = f(V_R)$

T_A = Parameter



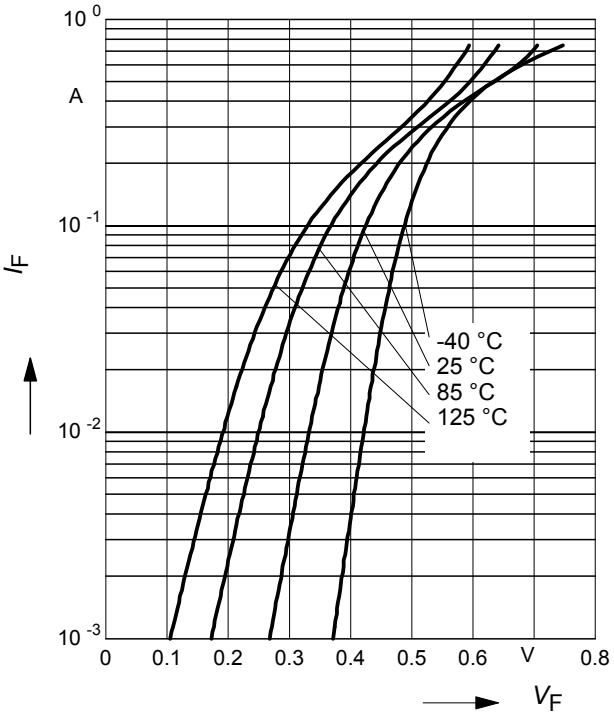
Forward Voltage $V_F = f(T_A)$

I_F = Parameter



Forward current $I_F = f(V_F)$

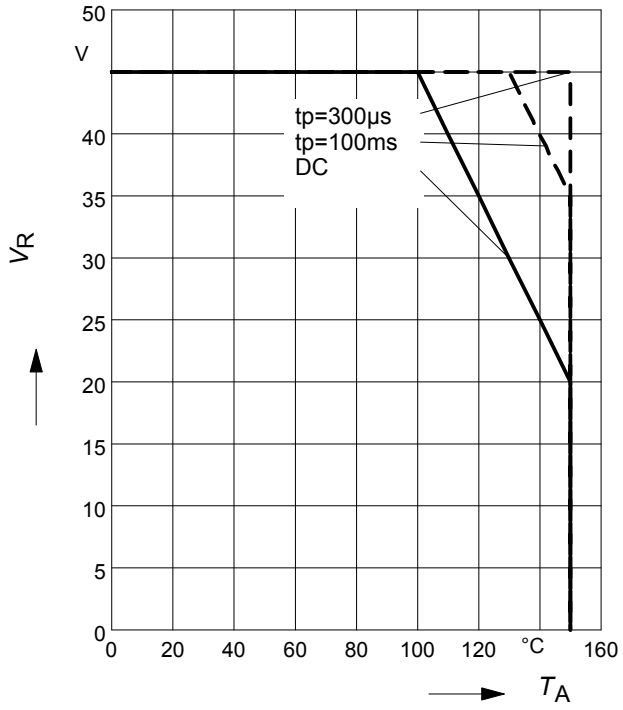
T_A = Parameter



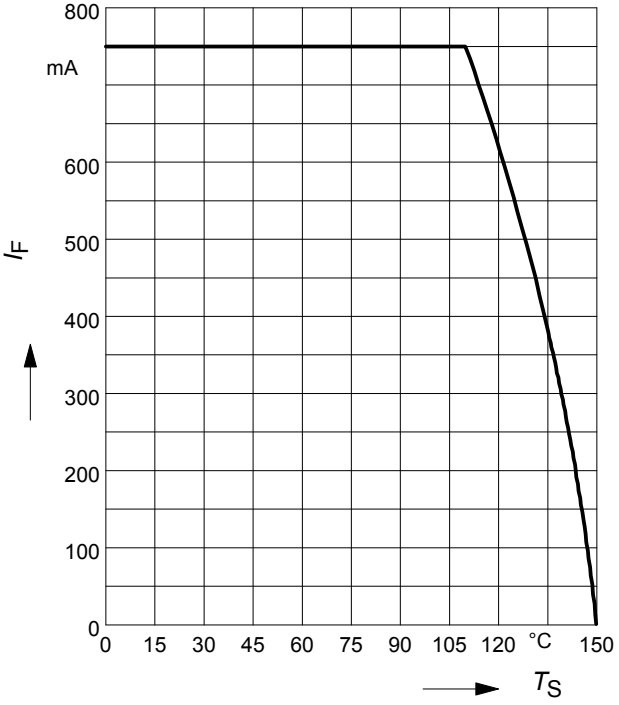
Permissible Reverse voltage $V_R = f(T_A)$

t_p = Parameter

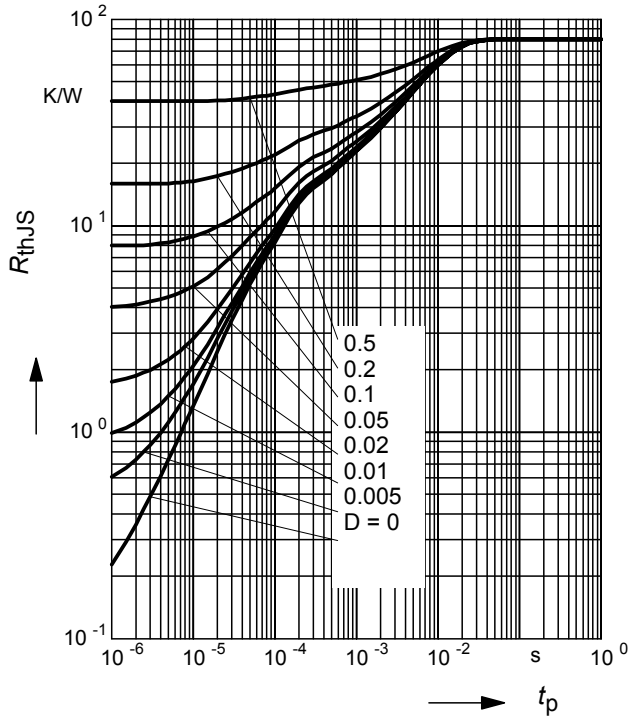
Duty cycle < 0.01



Forward current $I_F = f(T_S)$



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



Permissible Pulse Load

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