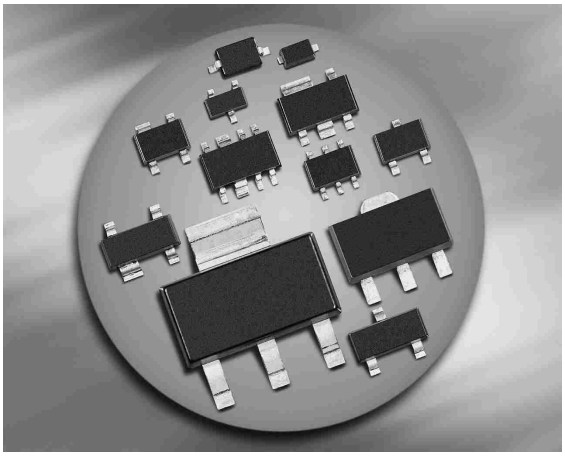
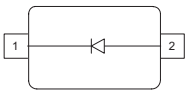
Silicon Schottky Diode

- High current rectifier Schottky diode with very low V_F drop (typ. 0.24 V at I_F = 10mA)
- For power supply applications
- For clamping and protection in low voltage applications
- For detection and step-up-conversion



BAT60B



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

Type	Package	Configuration	Marking
BAT60B	SOD323	single	white/5

Maximum Ratings at T_A = 25°C, unless otherwise specified

Parameter	Symbol	Value	Unit
Diode reverse voltage[1)]	V_R	10	V
Forward current	I_F	3	A
Non-repetitive peak surge forward current ($t \leq$ 10ms)	I_{FSM}	5	
Total power dissipation $T_S \leq$ 28°C	P_{tot}	1350	mW
Junction temperature	T_j	150	°C
Operating temperature range	T_{op}	-55 ... 125	
Storage temperature	T_{stg}	-55 ... 150	

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point[2)]	R_{thJS}	≤ 90	K/W

[1]For T_A > 25 °C the derating of V_R has to be considered. Please refer to curve Permissible reverse voltage.

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

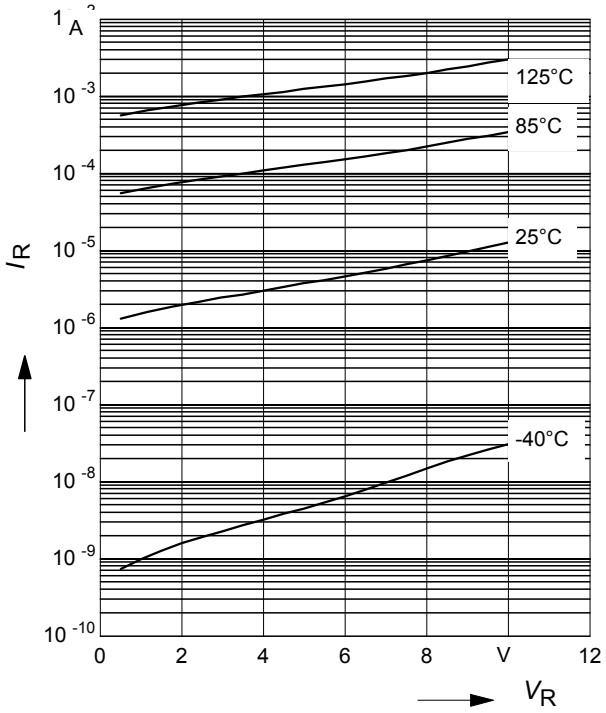
Electrical Characteristics at T_A = 25°C, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Reverse current[1)]	I_R				µA
V_R = 5 V		-	5	15	
V_R = 8 V		-	10	25	
V_R = 5 V, T_A = 80 °C		-	100	800	
V_R = 8 V, T_A = 80 °C		-	410	1500	
Forward voltage[1)]	V_F				V
I_F = 10 mA		0.2	0.24	0.3	
I_F = 100 mA		0.26	0.32	0.38	
I_F = 500 mA		0.32	0.4	0.5	
I_F = 1000 mA		0.36	0.48	0.6	
AC Characteristics					
Diode capacitance	C_T	12	25	30	pF
V_R = 5 V, f = 1 MHz					

[1]Pulsed test: t_p = 300 µs; D = 0.01

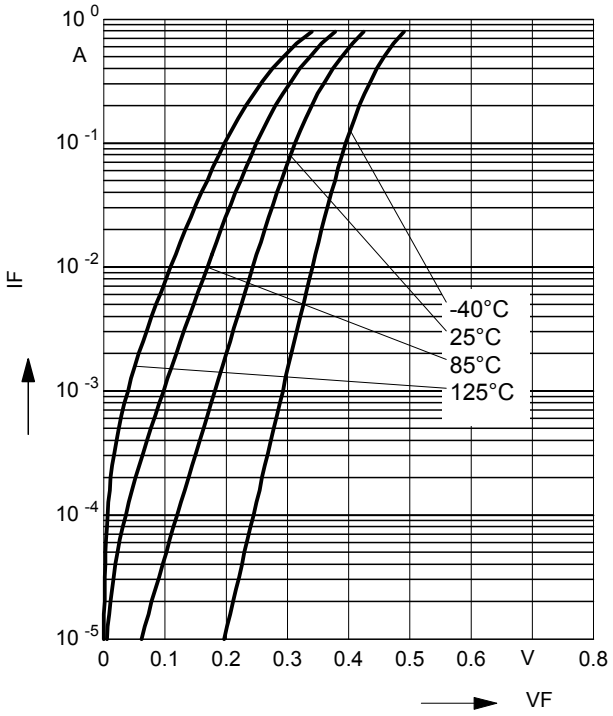
Reverse current $I_R = f(V_R)$

T_A = Parameter



Forward current $I_F = f(V_F)$

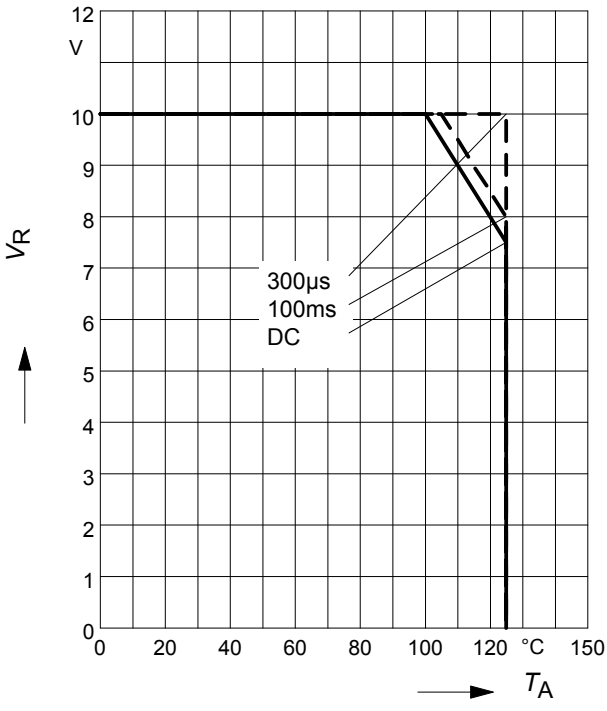
T_A = Parameter



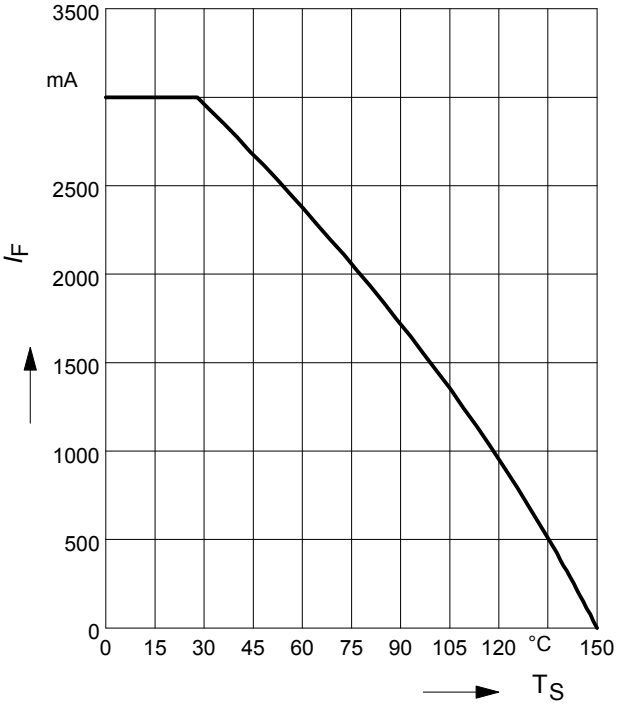
Permissible Reverse voltage $V_R = f(T_A)$

t_p = Parameter; duty cycle < 0.01

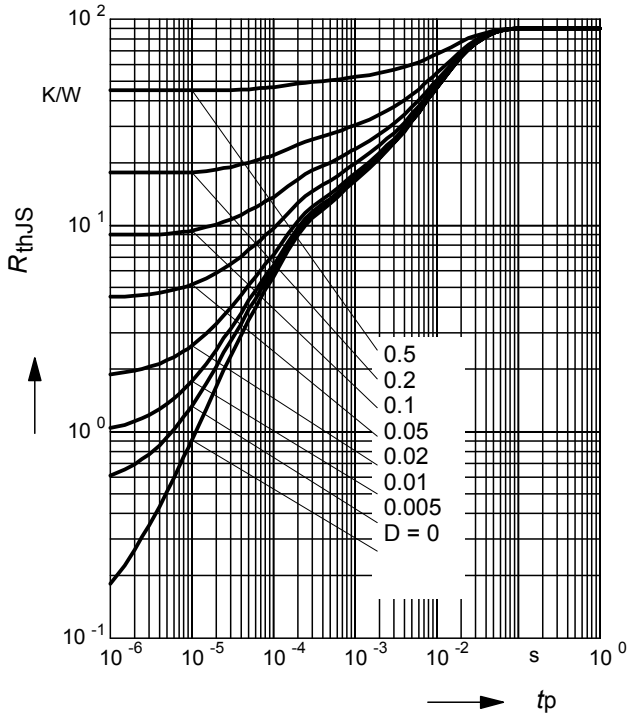
Device mounted on PCB with R_{th} = 160 K/W



Forward current $I_F = f(T_S)$

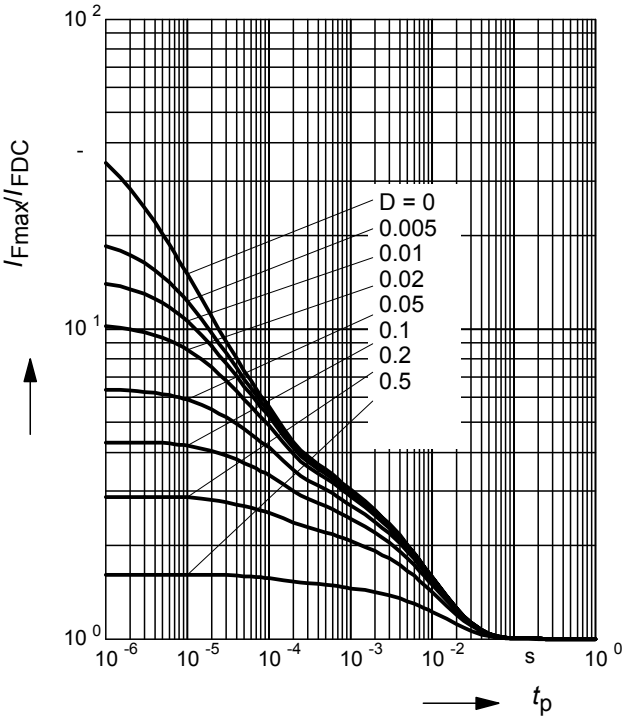


Permissible Puls Load $R_{thJS} = f(t_p)$



Permissible Pulse Load

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



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