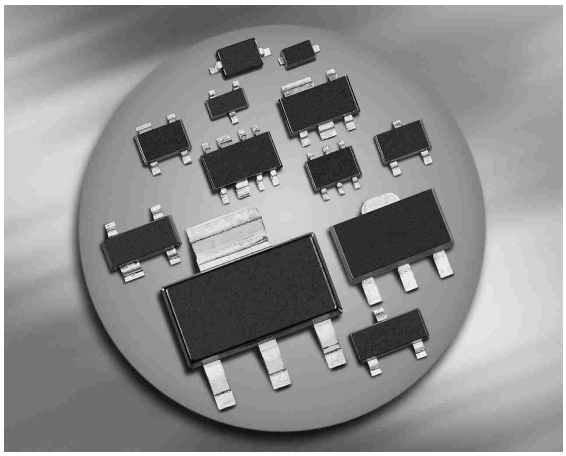
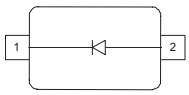
Silicon Schottky Diode

- Medium current Schottky rectifier diode
- For low-loss, fast-recovery, meter protection, bias isolation and clamping applications
- Miniature plastic package for surface mounting (SMD)



BAT165



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

Type	Package	Configuration	Marking
BAT165	SOD323	single	C/White

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

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	40	V
Forward current	I_F	750	mA
Surge forward current, ($t \leq$ 10ms)	I_{FSM}	2.5	A
Average forward current (50/60Hz, sinus)	I_{FAV}	500	mA
Total power dissipation $T_S \leq$ 66°C	P_{tot}	600	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}	≤ 140	K/W

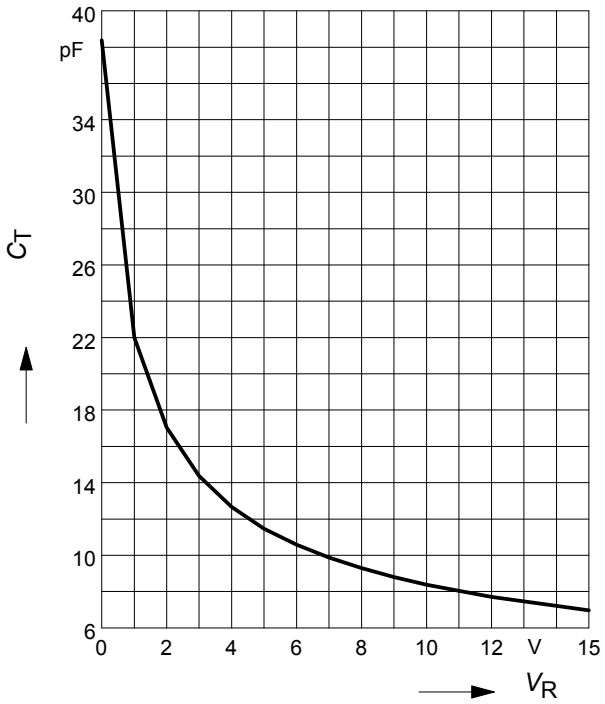
[1]For calculation of R_{thJA} please refer to Application Note Thermal Resistance

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 = 30 V		-	-	50	
V_R = 30 V, T_A = 65 °C		-	-	900	
Forward voltage	V_F				V
I_F = 10 mA		-	0.305	0.4	
I_F = 100 mA		-	0.38	-	
I_F = 250 mA		-	0.44	0.7	
I_F = 750 mA		-	0.58	-	
AC Characteristics					
Diode capacitance	C_T	-	8.4	12	pF
V_R = 10 V, f = 1 MHz					

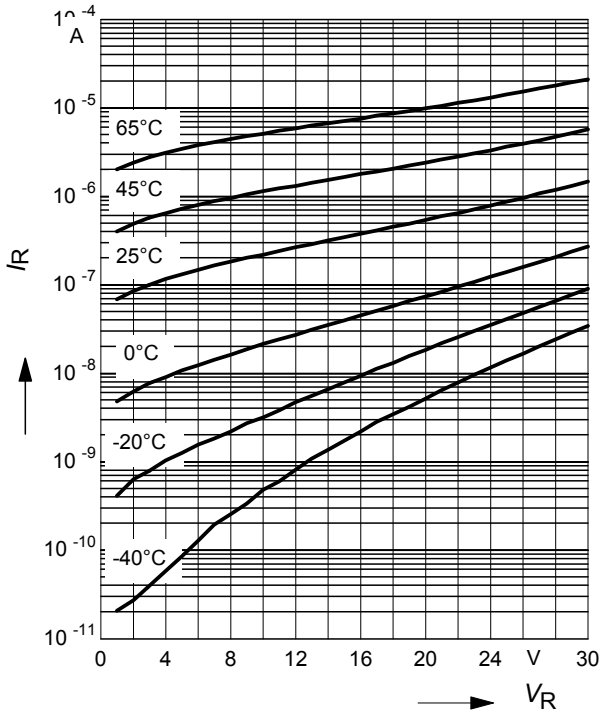
Diode capacitance $C_T = f(V_R)$

f = 1MHz



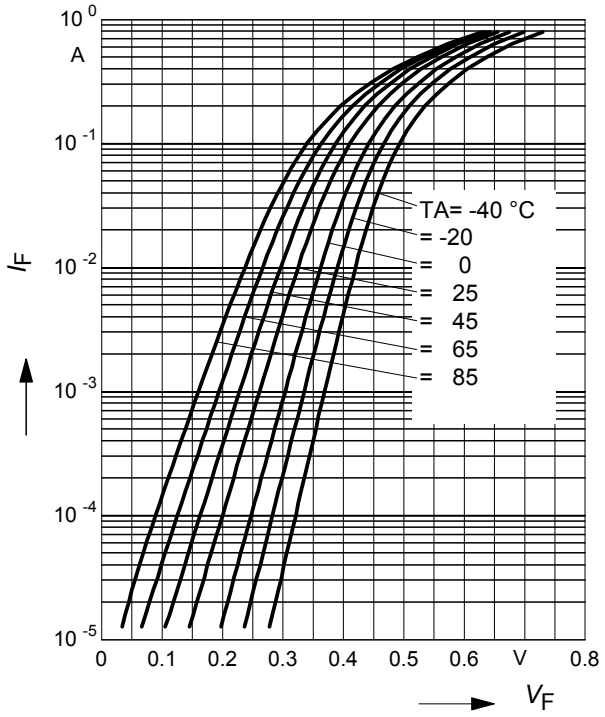
Reverse current $I_R = f(V_R)$

T_A = Parameter

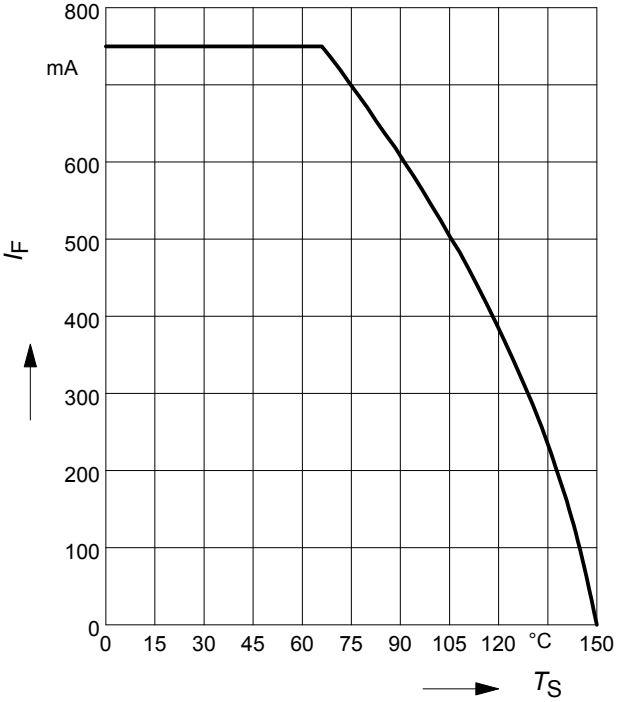


Forward current $I_F = f(V_F)$

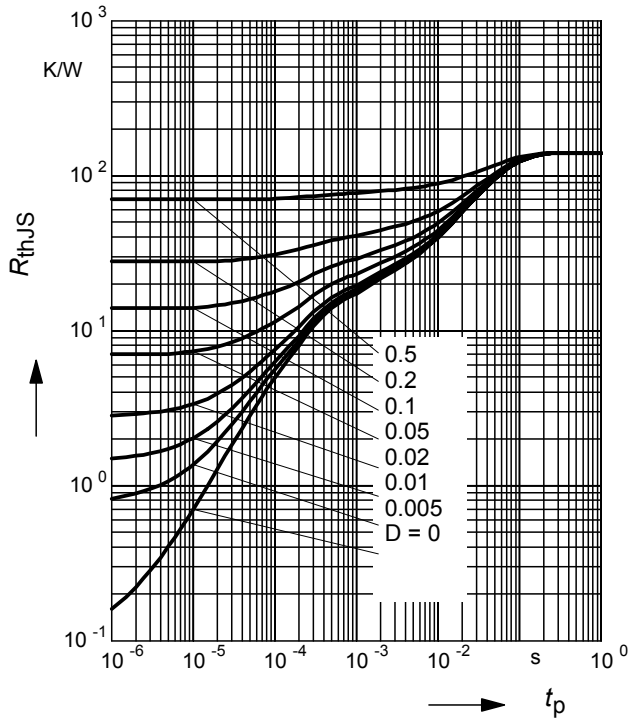
T_A = Parameter



Forward current $I_F = f(T_S)$



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



Permissible Pulse Load

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