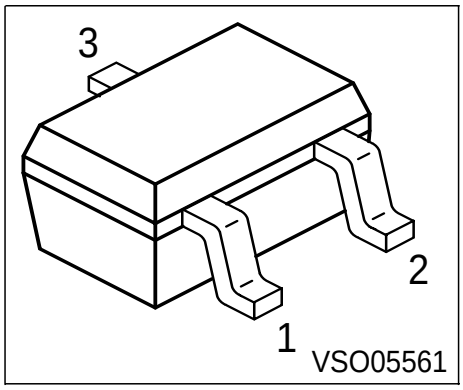
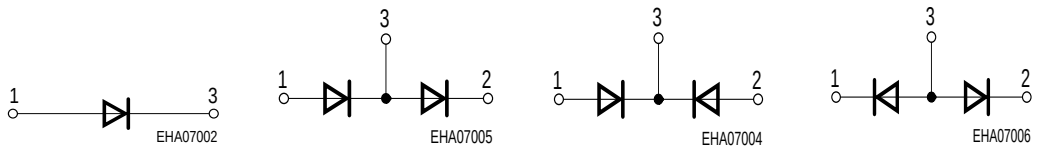
Silicon Schottky Diodes

- For low-loss, fast-recovery, meter protection, bias isolation and clamping applications
- Integrated diffused guard ring
- Low forward voltage



BAS125W **BAS125-04W** **BAS125-05W** **BAS125-06W**



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

Type	Marking	Pin Configuration			Package
BAS125W	13s	1 = A	2 n.c.	3 = C	SOT323
BAS125-04W	14s	1 = A1	2 = C2	3 = C1/A2	SOT323
BAS125-05W	15s	1 = A1	2 = A2	3 = C1/2	SOT323
BAS125-06W	16s	1 = C1	2 = C2	3 = A1/2	SOT323

Maximum Ratings

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	25	V
Forward current	I_F	100	mA
Surge forward current (t< 100µs)	I_{FSM}	500	
Total power dissipation BAS125W, T_S = 93 °C	P_{tot}	250	mW
BAS 125-04W...06W , T_S = 84 °C	P_{tot}	250	
Junction temperature	T_j	150	°C
Operating temperature range	T_{op}	-55 ... 150	
Storage temperature	T_{stg}	-55 ... 150	

Thermal Resistance

Junction - soldering point[1)]	R_{thJS}		K/W
BAS125W		≤ 230	
BAS125-04W...06W		≤ 265	

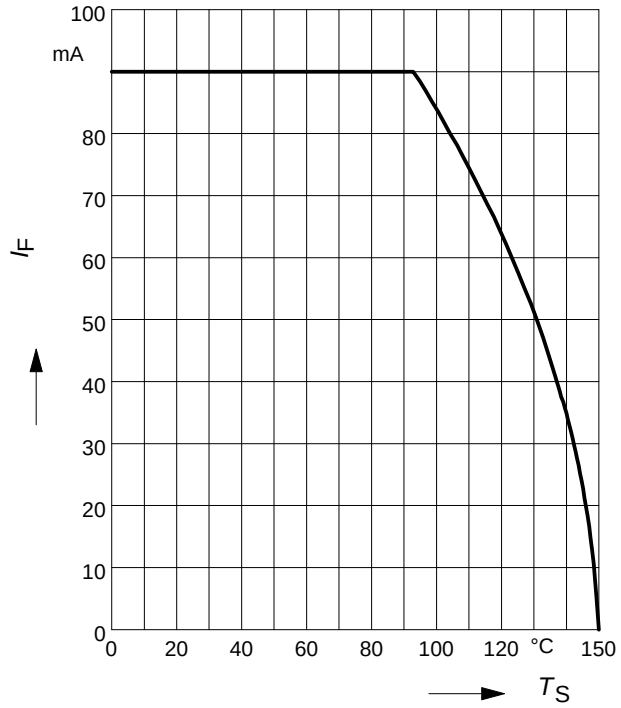
[1]For calculation of R_{thJA} please refer to Application Note Thermal Resistance

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC characteristics					
Reverse current	I_R				nA
V_R = 20 V		-	-	100	
V_R = 25 V		-	-	150	
Forward voltage	V_F				mV
I_F = 1 mA		-	385	400	
I_F = 10 mA		-	530	650	
I_F = 35 mA		-	800	950	
AC characteristics					
Diode capacitance V_R = 0 V, f = 1 MHz	C_T	-	-	1.1	pF
Differential forward resistance I_F = 5 mA, f = 10 kHz	R_f	-	16	-	Ω

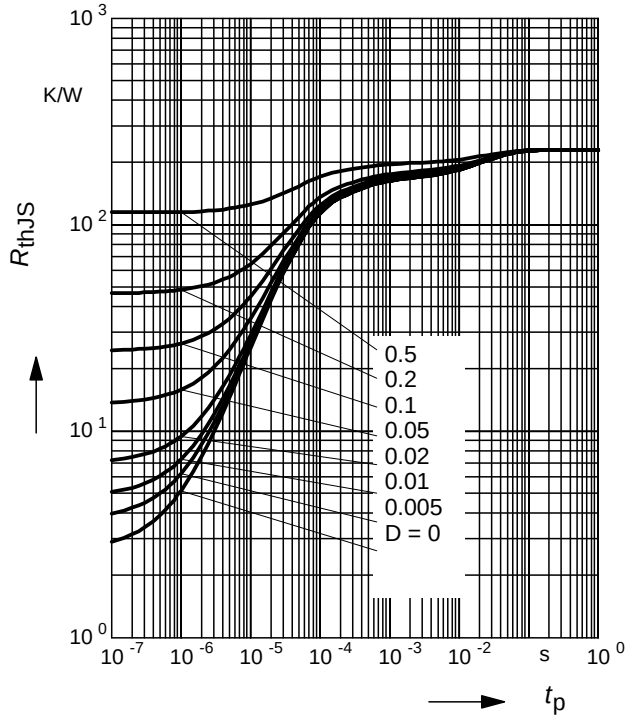
Forward current $I_F = f(T_S)$

BAS125W



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

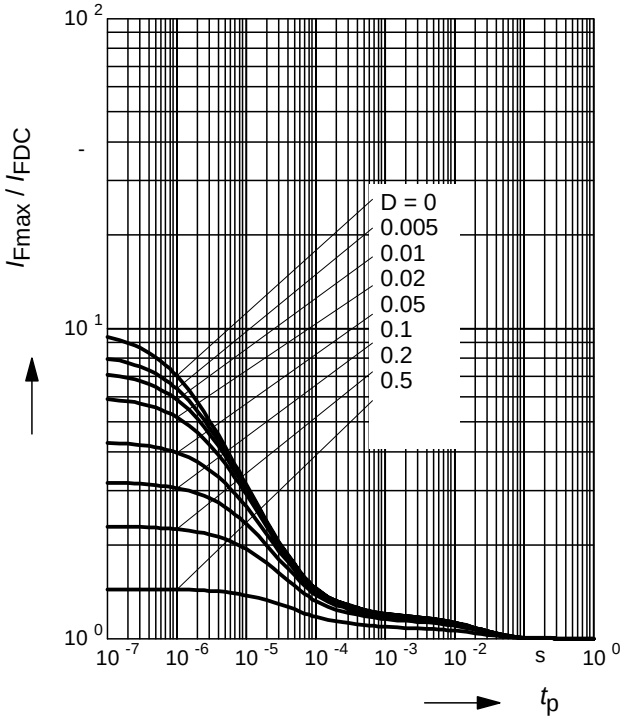
BAS125W



Permissible Pulse Load

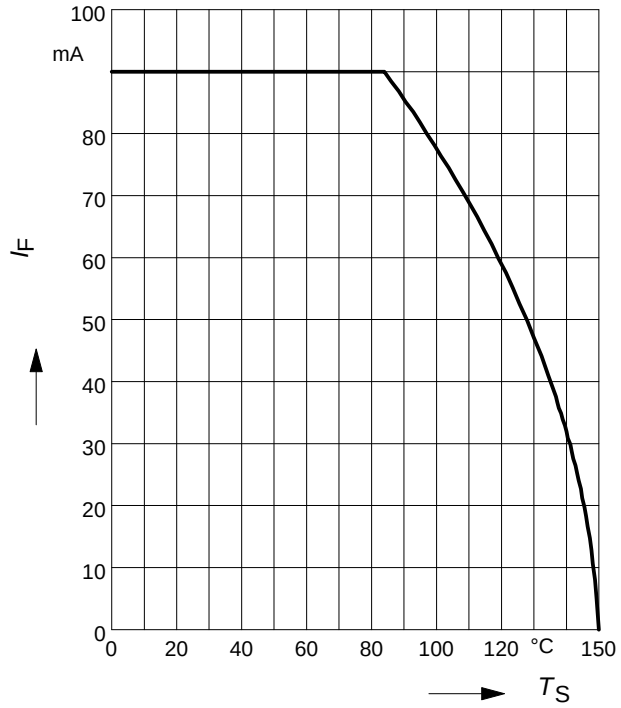
$I_{Fmax} / I_{FDC} = f(t_p)$

BAS125W



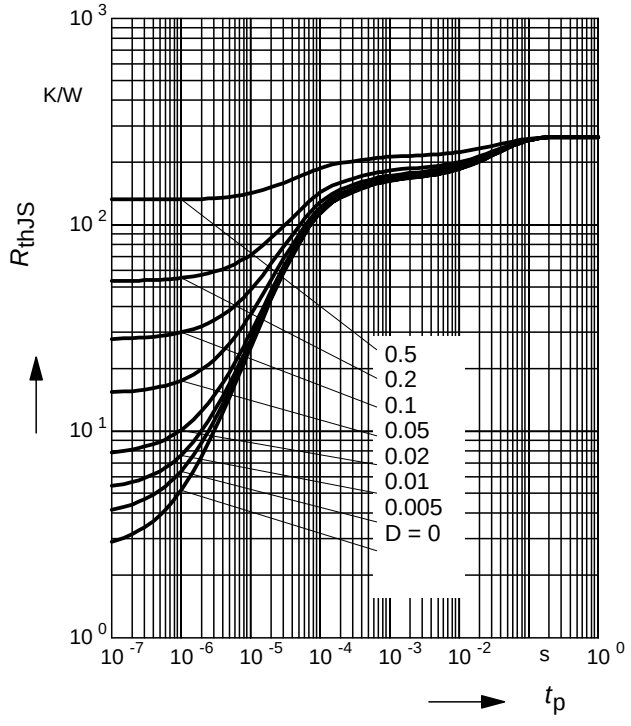
Forward current $I_F = f(T_S)$

BAS125-04W...06W (I_F per diode)



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

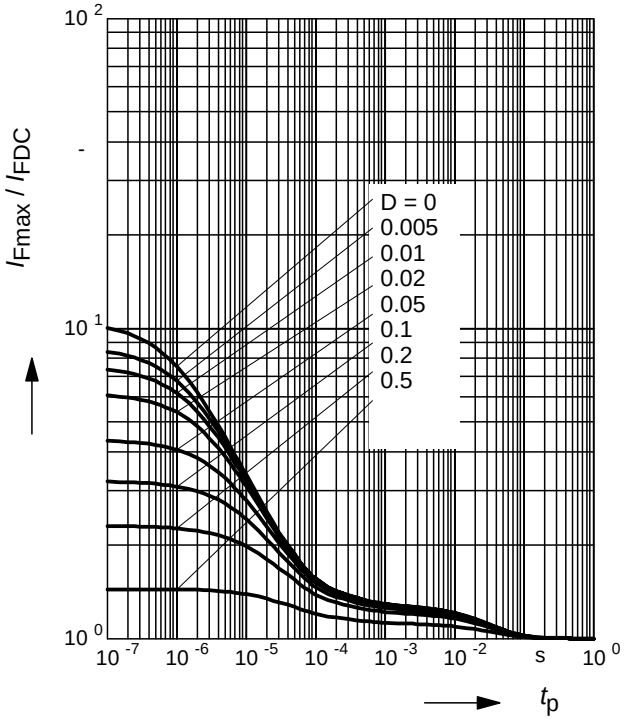
BAS125-04W...06W



Permissible Pulse Load

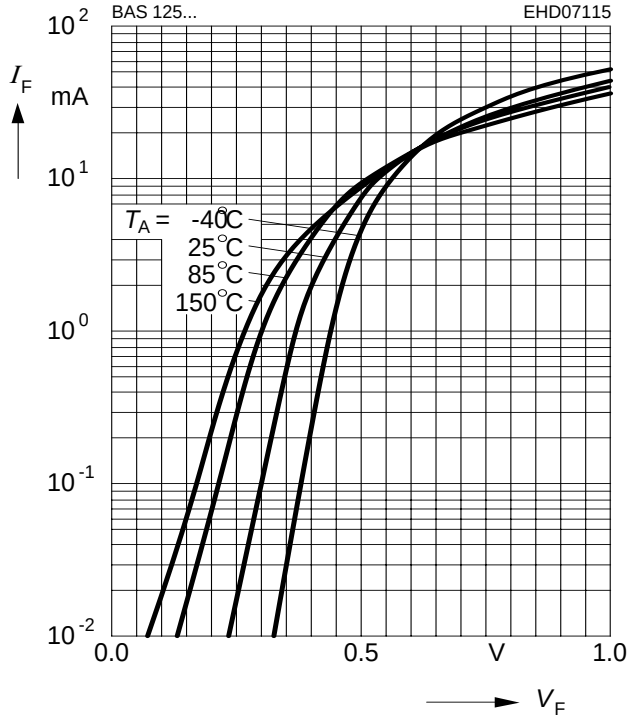
$I_{Fmax} / I_{FDC} = f(t_p)$

BAS125-04W...06W



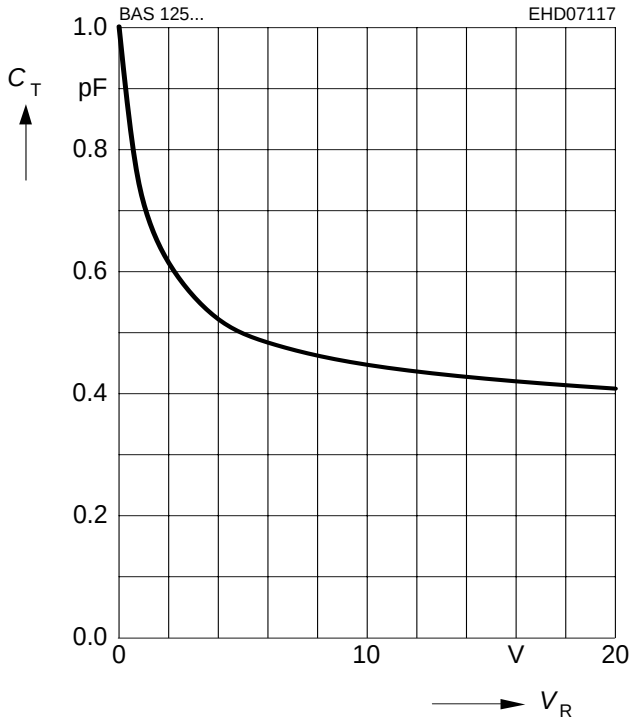
Forward current $I_F = f(V_F)$

T_A = Parameter



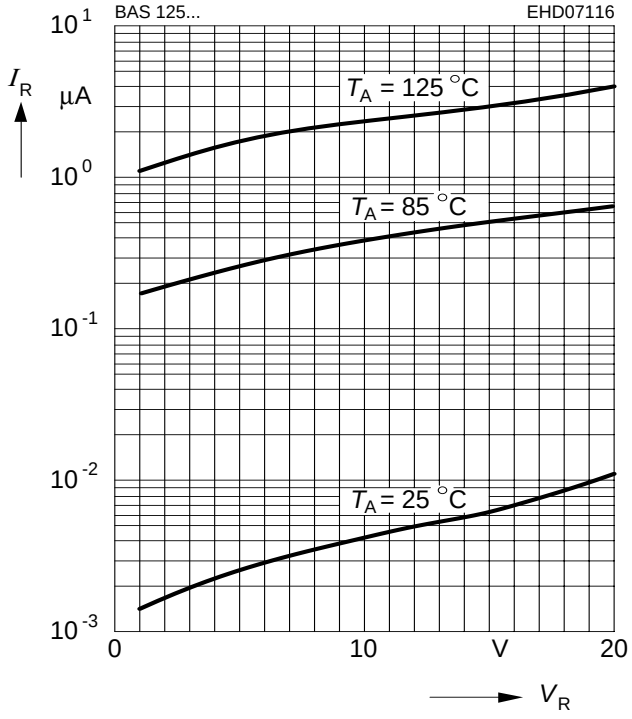
Diode capacitance $C_T = f(V_R)$

f = 1MHz



Reverse current $I_R = f(V_R)$

T_A = Parameter



Differential forward resistance $r_f = f(I_F)$

f = 10 kHz