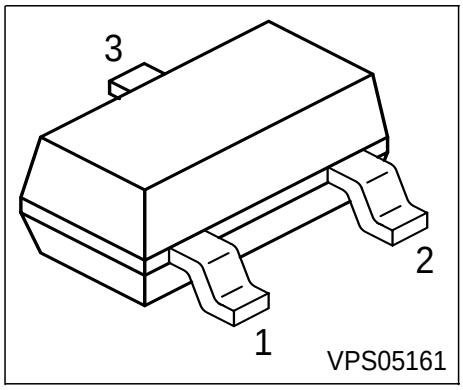
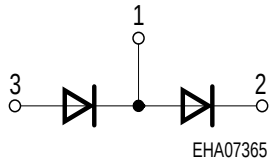
Silicon Switching Diodes

- Switching applications
- High breakdown voltage
- Halfbridge rectifier





Type	Marking	Pin Configuration			Package
BGX400	GXs	1=C1/A2	2=C2	3=A1	SOT23

Maximum Ratings

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	400	V
Peak reverse voltage	V_{RM}	400	
Forward current	I_F	250	mA
Surge forward current, t = 1 ms	I_{FS}	2	A
Total power dissipation, T_S = 71 °C	P_{tot}	250	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-65 ... 150	

Thermal Resistance

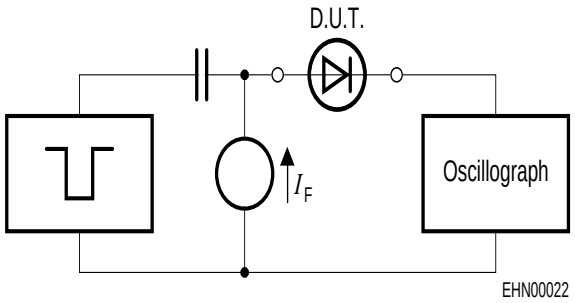
Junction - soldering point[1)]	R_{thJS}	≤ 315	K/W

[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					
Breakdown voltage $I_{(BR)}$ = 100 µA	$V_{(BR)}$	400	-	-	V
Forward voltage I_F = 1 A I_F = 2 A	V_F	 - -	 - -	 1.6 2	
Reverse current V_R = 400 V	I_R	-	-	1	µA
Reverse current V_R = 400 V, T_A = 150 °C	I_R	-	-	50	
AC characteristics					
Diode capacitance V_R = 0 V, f = 1 MHz	C_D	-	10	-	pF
Reverse recovery time I_F = 200 mA, I_R = 200 mA, R_L = 100 Ω, measured at I_R = 20mA	t_{rr}	-	1	-	µs

Test circuit for reverse recovery time

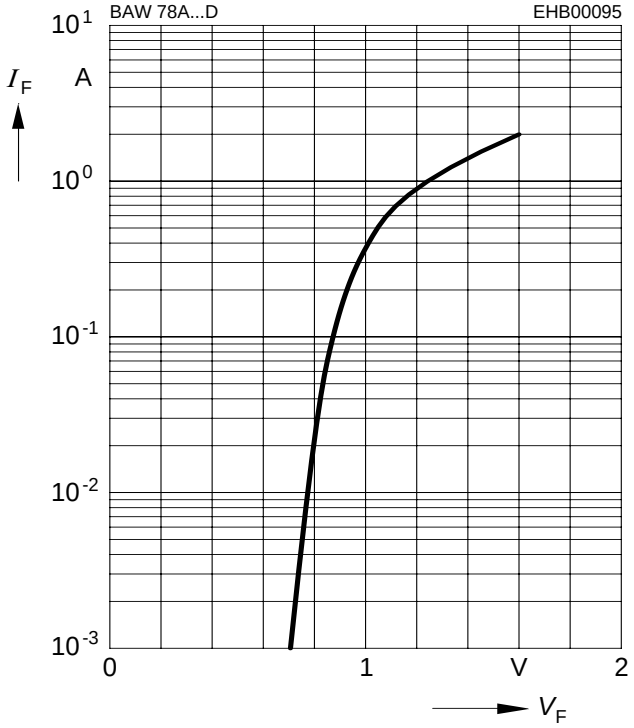


Pulse generator: t_p = 10µs, D = 0.05,
t_r = 0.6ns, R_i = 50Ω

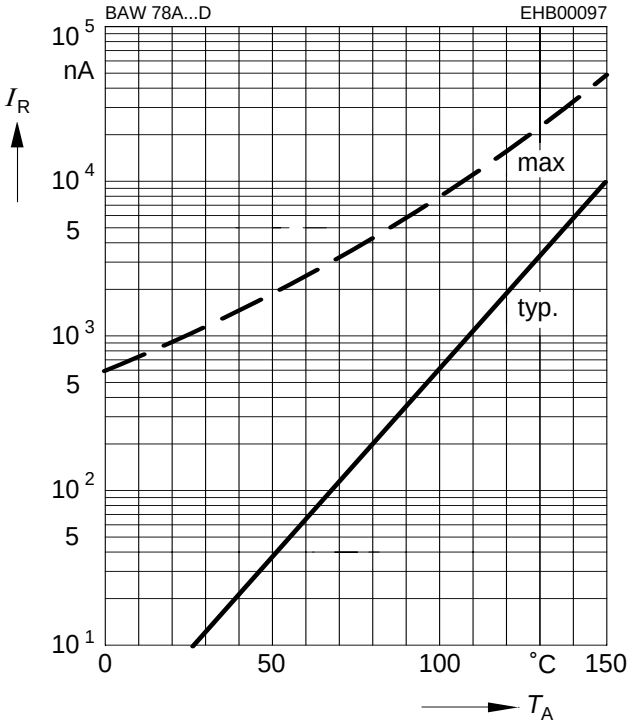
Oscillograph: R = 50Ω, t_r = 0.35ns,
$C \leq$ 1pF

Forward current $I_F = f(V_F)$

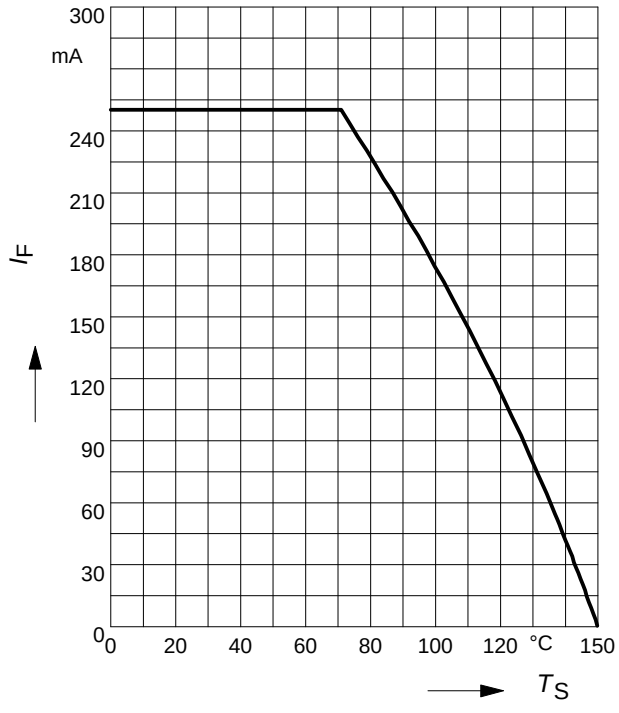
$T_A = 25°C$



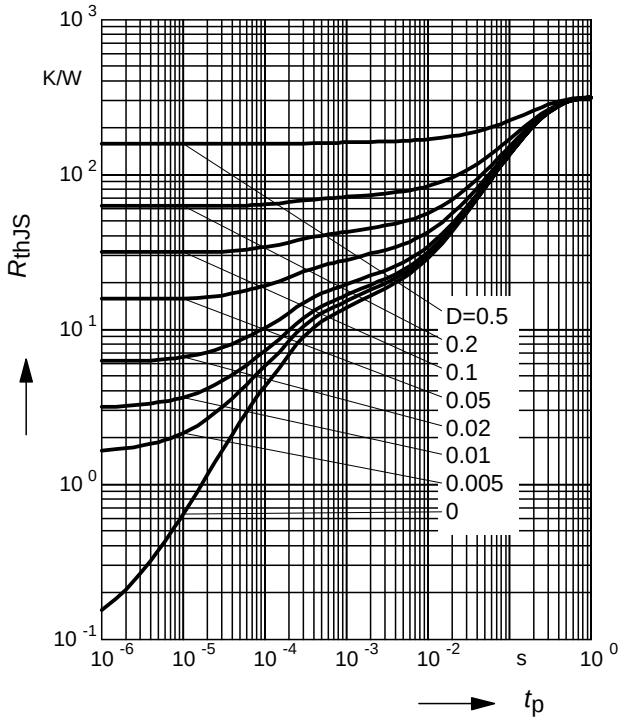
Reverse current $I_R = f(T_A)$



Forward current $I_F = f(T_S)$



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



Permissible Pulse Load

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