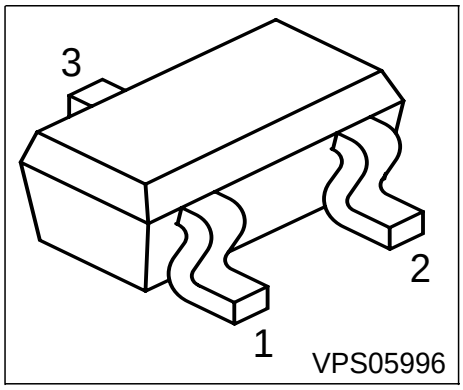
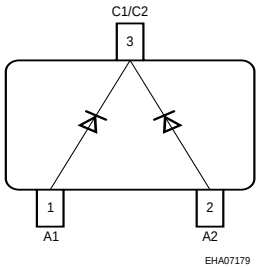
Silicon Switching Diode Array

- For high-speed switching applications
- Common cathode





Type	Marking	Pin Configuration			Package
BAV70T	A4s	1 = A1	2 = A2	3 = C1/2	SC75

Maximum Ratings

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	70	V
Peak reverse voltage	V_{RM}	70	
Forward current	I_F	200	mA
Surge forward current, t = 1 µs	I_{FS}	4.5	A
Total power dissipation, T_S = 73 °C	P_{tot}	250	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-65 ... 150	

Thermal Resistance

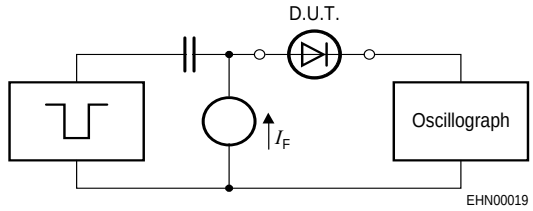
Junction - soldering point[1)]	R_{thJS}	≤ 310	K/W

[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	$V_{(BR)}$	70	-	-	V
Forward voltage	V_F				mV
I_F = 1 mA		-	-	715	
I_F = 10 mA		-	-	855	
I_F = 50 mA		-	-	1000	
I_F = 150 mA		-	-	1250	
Reverse current V_R = 70 V	I_R	-	-	2.5	µA
Reverse current	I_R				
V_R = 25 V, T_A = 150 °C		-	-	30	
V_R = 70 V, T_A = 150 °C		-	-	50	
AC characteristics					
Diode capacitance V_R = 0 V, f = 1 MHz	C_D	-	-	1.5	pF
Reverse recovery time I_F = 10 mA, I_R = 10 mA, R_L = 100 Ω, measured at I_R = 1mA	t_{rr}	-	-	6	ns

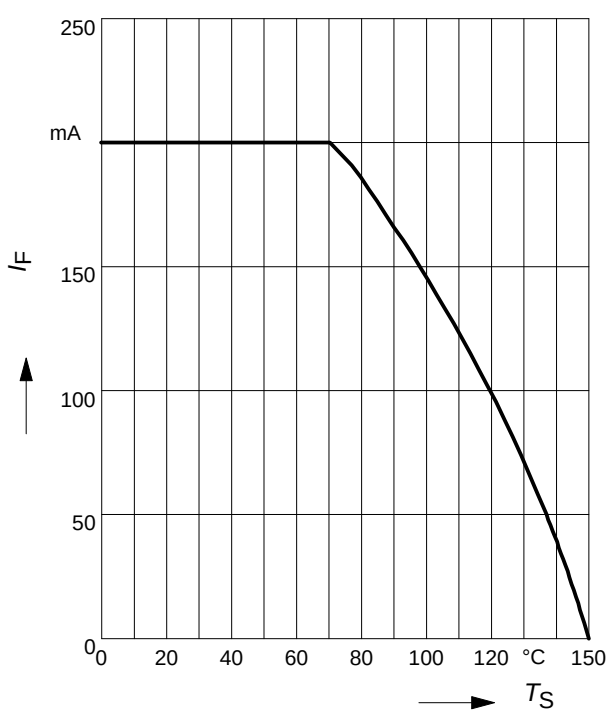
Test circuit for reverse recovery time



Pulse generator: t_p = 100ns, D = 0.05,
t_r = 0.6ns, R_i = 50Ω

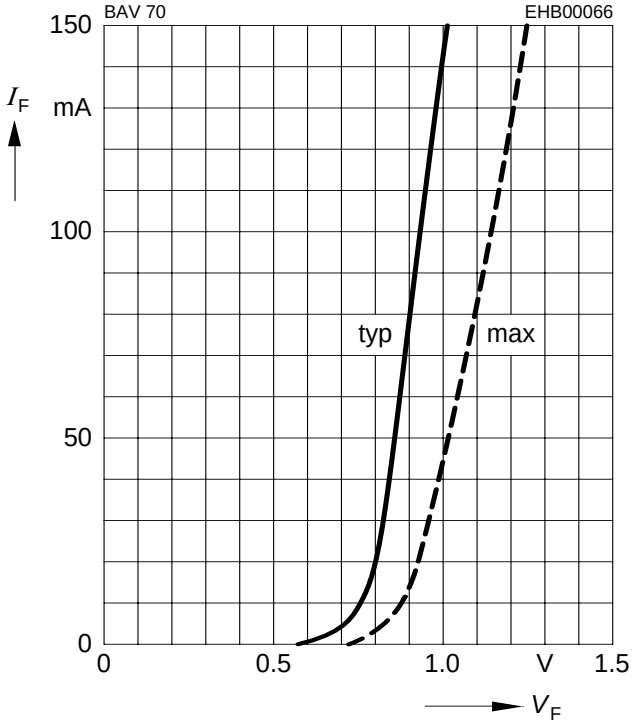
Oscillograph: R = 50Ω, t_r = 0.35ns,
$C \leq$ 1pF

Forward current $I_F = f(T_S)$

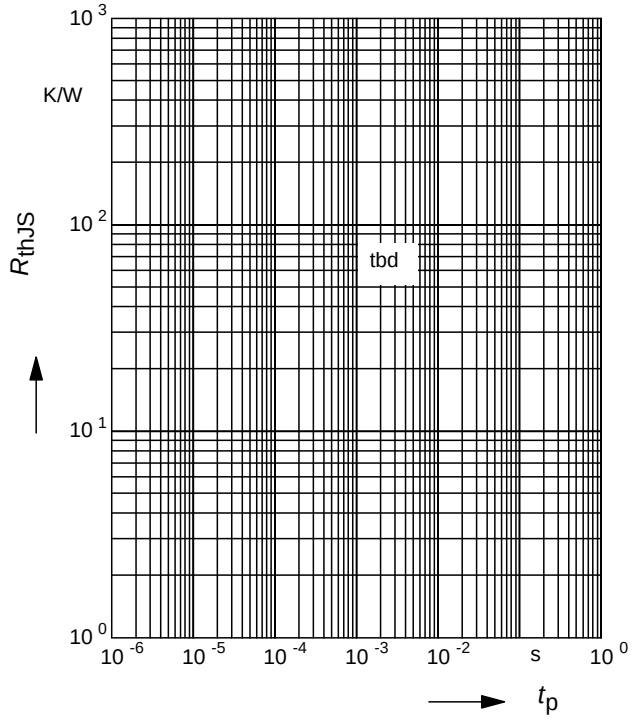


Forward current $I_F = f(V_F)$

T_A = 25°C

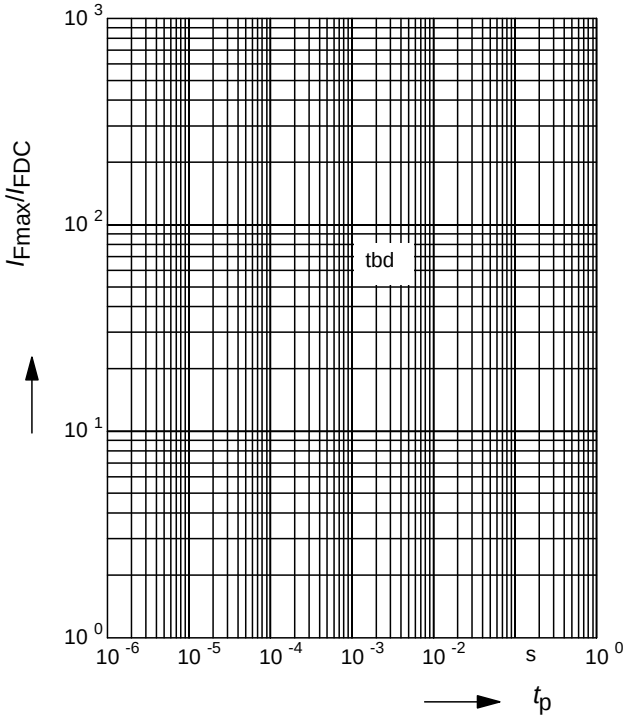


Permissible Pulse Load $R_{thJS} = f(t_p)$

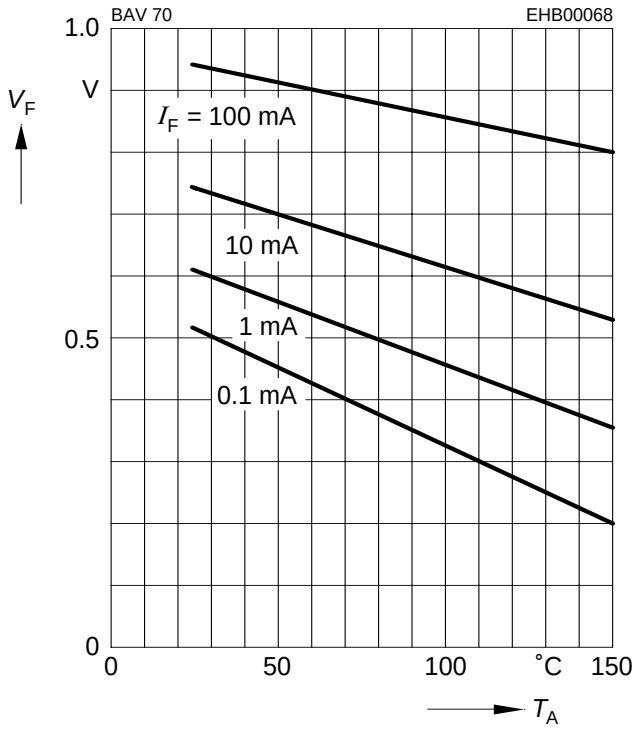


Permissible Pulse Load

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



Forward voltage $V_F = f(T_A)$



Reverse current $I_R = f(T_A)$