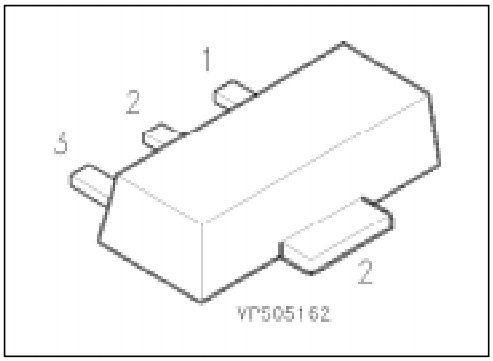
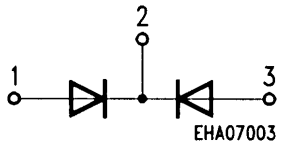
SIEMENS

Silicon Switching Diodes

BAW 79 A
... BAW 79 D

- For high-speed switching
- High breakdown voltage
- Common cathode



Type	Marking	Ordering Code (tape and reel)	Pin Configuration	Package[1)]
BAW 79 A BAW 79 B BAW 79 C BAW 79 D	GE GF GG GH	Q62702-A781 Q62702-A782 Q62702-A771 Q62702-A733		SOT-89

Maximum Ratings per Diode

Parameter	Symbol	Values				Unit
		BAW	BAW	BAW	BAW	
Reverse voltage	V_R	50	100	200	400	V
Peak reverse voltage	V_{RM}	50	100	200	400	
Forward current	I_F	1				A
Peak forward current	I_{FM}	1				
Surge forward current t = 1 µs	I_{FS}	10				
Total power dissipation T_S = 115 ˚C	P_{tot}	1				W
Junction temperature	T_j	150				˚C
Storage temperature range	T_{stg}	– 65 … + 150				

Thermal Resistance

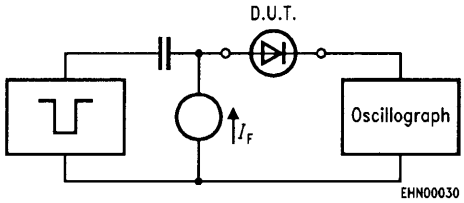
Junction - ambient[2)]	$R_{th\ JA}$	≤ 175	K/W
Junction - soldering point	$R_{th\ JS}$	≤ 35	

1) For detailed information see chapter Package Outlines.
2) Package mounted on epoxy pcb 40 mm × 40 mm × 1.5 mm/6 cm² Cu.

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC characteristics					
Breakdown voltage $I_{(BR)}$ = 100 µA	$V_{(BR)}$				V
BAW 79 A		50	–	–	
BAW 79 B		100	–	–	
BAW 79 C		200	–	–	
BAW 79 D		400	–	–	
Forward voltage[1] I_F = 1 A I_F = 2 A	V_F	 – –	 – –	 1.6 2	V
Reverse current $V_R = V_{Rmax}$ $V_R = V_{Rmax}$, T_A = 150 °C	I_R	 – –	 – –	 1 50	µA
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 = 20 mA	t_{rr}	–	1	–	µs

Test circuit for reverse recovery time

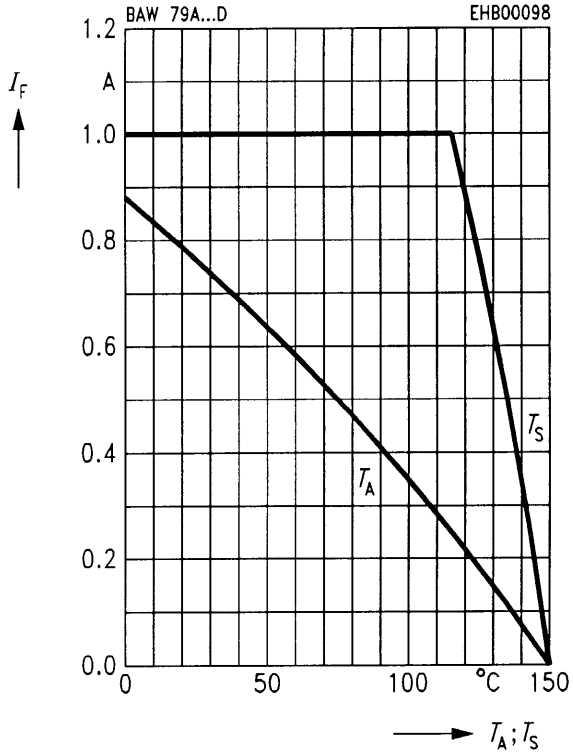


Pulse generator: t_p = 5 µs, D = 0.05
t_r = 0.6 ns, R_i = 50 Ω

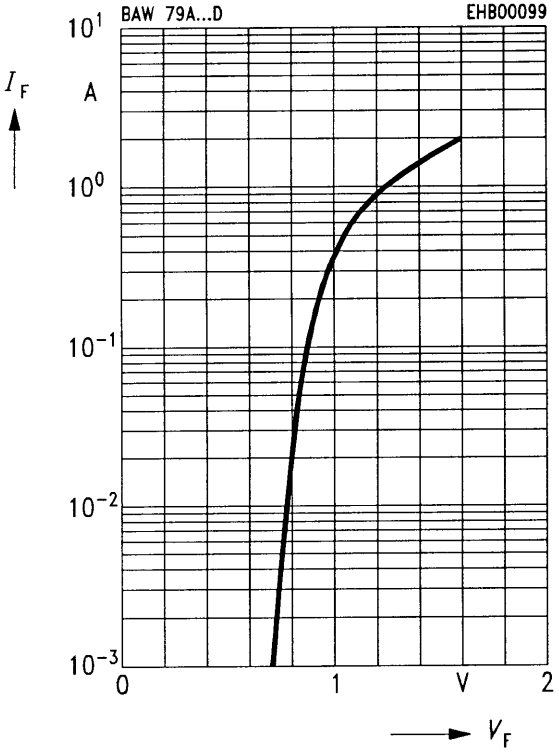
Oscillograph: R = 50 Ω
t_r = 0.35 ns
$C \leq$ 1 pF

[1] Pulse test: $t_p \leq$ 300 µs, D = 2 %.

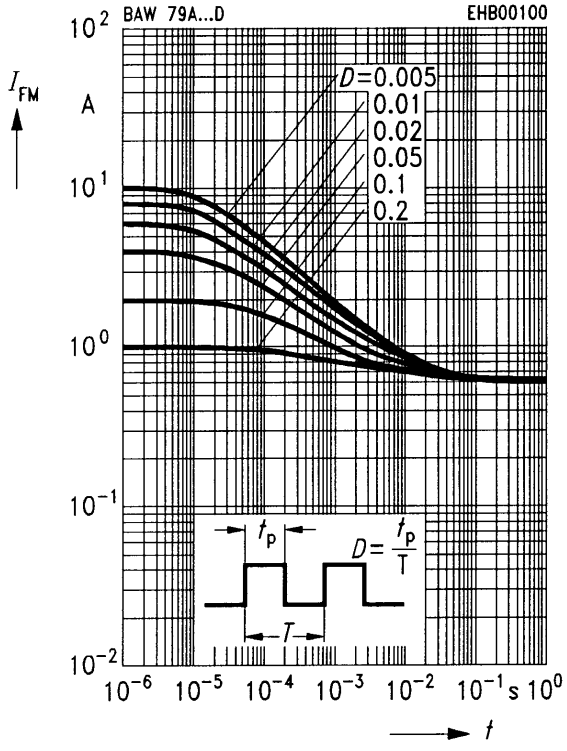
Forward current $I_F = f(T_A^*; T_S)$
* Package mounted on epoxy



Forward current $I_F = f(V_F)$
T_A = 25 °C



Peak forward current $I_{FM} = f(t)$
T_A = 25 °C



Reverse current $I_R = f(T_A)$
$V_R = V_{Rmax}$

