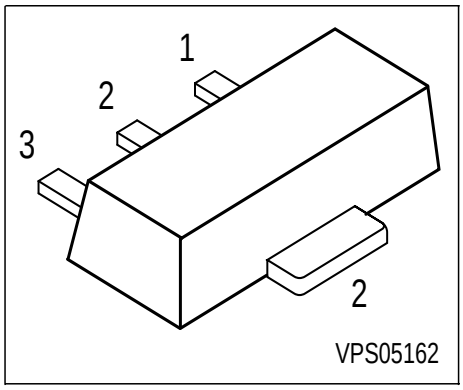
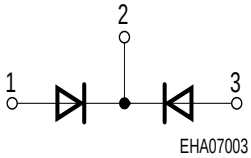
## Silicon Switching Diodes

- Switching applications
- High breakdown voltage
- Common cathode




| Type | Marking | Pin Configuration | | | Package |
|---|---|---|---|---|---|
| BAW79A | GE | 1 = A1 | 2 = C1/2 | 3 = A2 | SOT89 |
| BAW79B | GF | 1 = A1 | 2 = C1/2 | 3 = A2 | SOT89 |
| BAW79C | GG | 1 = A1 | 2 = C1/2 | 3 = A2 | SOT89 |
| BAW79D | GH | 1 = A1 | 2 = C1/2 | 3 = A2 | SOT89 |

**Maximum Ratings**

| Parameter | Symbol | BAW 79A | BAW 79B | BAW 79C | BAW 79D | Unit |
|---|---|---|---|---|---|---|
| Diode 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 | $T_{stg}$ | -65 ... 150 | | | | |

**Thermal Resistance**

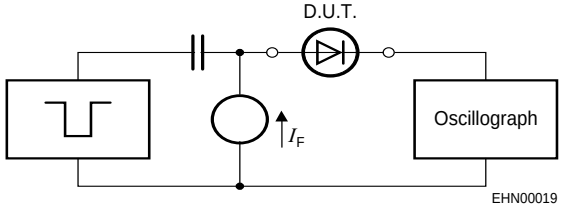
| | | | |
|---|---|---|---|
| Junction - soldering point[1)] | $R_{thJS}$ | ≤ 35 | K/W |

[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 | | $V_{(BR)}$ | | | | V |
| $I_{(BR)}$ = 100 µA | BAW79A | | 50 | - | - | |
| | BAW79B | | 100 | - | - | |
| | BAW79C | | 200 | - | - | |
| | BAW79D | | 400 | - | - | |
| Forward voltage | | $V_F$ | | | | |
| $I_F$ = 1 A | | | - | - | 1.6 | |
| $I_F$ = 2 A | | | - | - | 2 | |
| Reverse current | | $I_R$ | - | - | 1 | µA |
| $V_R = V_{Rmax}$ | | | | | | |
| Reverse current | | $I_R$ | - | - | 50 | |
| $V_R = V_{Rmax}$ , $T_A$ = 150 °C | | | | | | |
| **AC characteristics** | | | | | | |
| Diode capacitance | | $C_D$ | - | 10 | - | pF |
| $V_R$ = 0 V, $f$ = 1 MHz | | | | | | |
| Reverse recovery time | | $t_{rr}$ | - | 1 | - | µs |
| $I_F$ = 200 mA, $I_R$ = 200 mA, $R_L$ = 100 Ω, | | | | | | |
| measured at $I_R$ = 20mA | | | | | | |

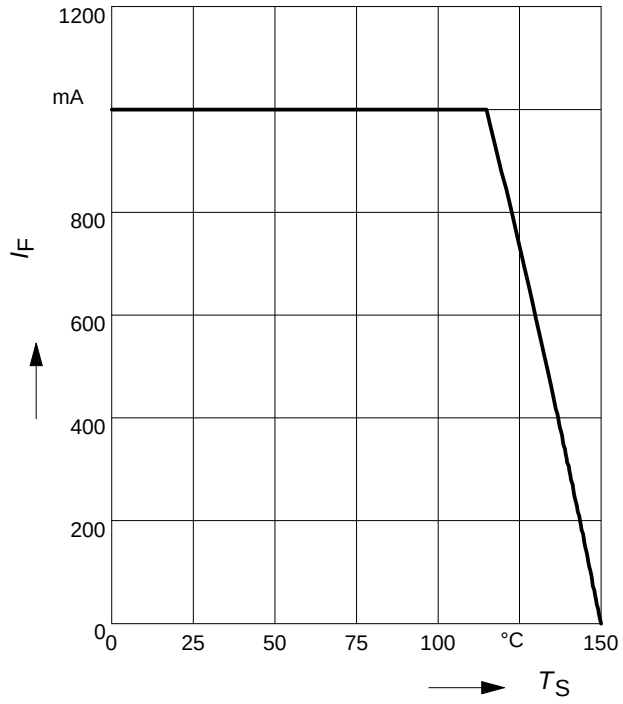
**Test circuit for reverse recovery time**




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

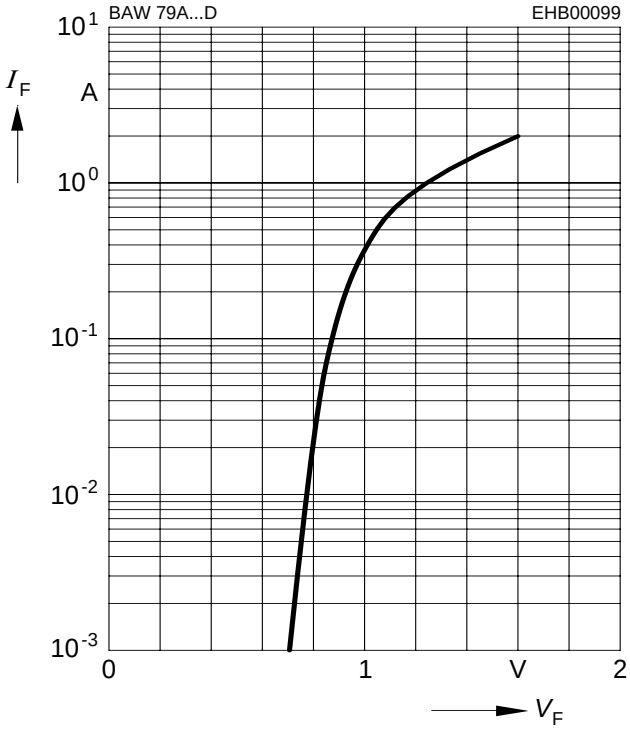
Oscillograph: $R$ = 50Ω, $t_r$ = 0.35ns, $C \leq$ 1pF

**Forward current $I_F = f(T_S)$**



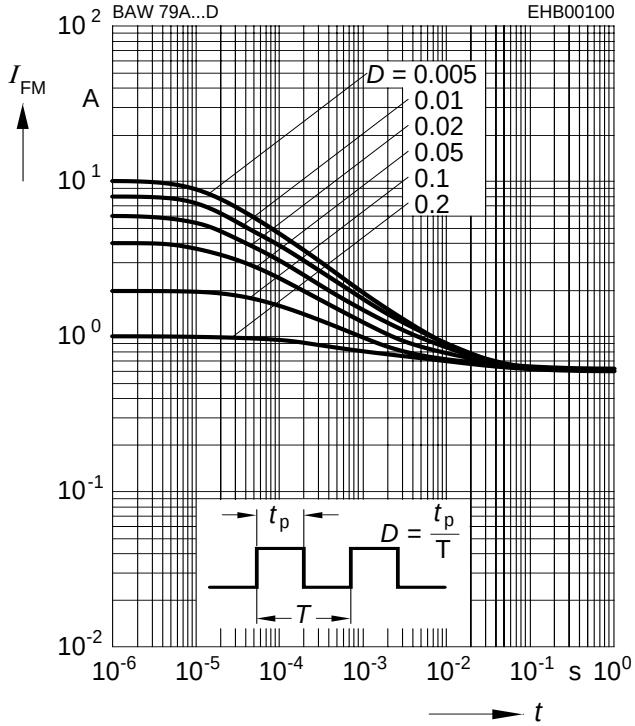

**Forward current $I_F = f(V_F)$**

$T_A$ = 25°C




**Peak forward current $I_{FM} = f(t_p)$**

$T_A$ = 25°C




**Reverse current $I_R = f(T_A)$**

$V_R = V_{Rmax}$