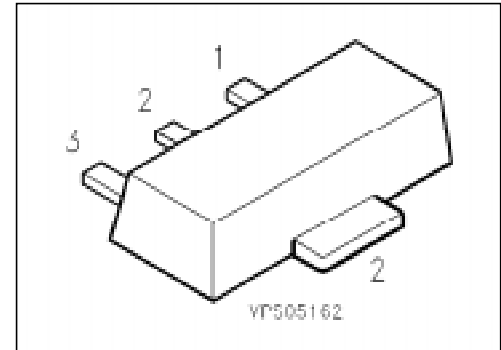


Silicon Switching Diodes

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 | GE | Q62702-A781 | | SOT-89 |
| BAW 79 B | GF | Q62702-A782 | | |
| BAW 79 C | GG | Q62702-A771 | | |
| BAW 79 D | GH | Q62702-A733 | | |

Maximum Ratings per Diode

| Parameter | Symbol | Values | | | | Unit |
|---|-----------|----------------|----------|----------|----------|------------------|
| | | BAW 79 A | BAW 79 B | BAW 79 C | BAW 79 D | |
| 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 $t = 1 \mu\text{s}$ | I_{FS} | 10 | | | | |
| Total power dissipation $T_s = 115 \text{ }^\circ\text{C}$ | P_{tot} | 1 | | | | W |
| Junction temperature | T_j | 150 | | | | $^\circ\text{C}$ |
| 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 $T_A = 25\text{ }^\circ\text{C}$, unless otherwise specified.

| Parameter | Symbol | Values | | | Unit |
|-----------|--------|--------|------|------|------|
| | | min. | typ. | max. | |

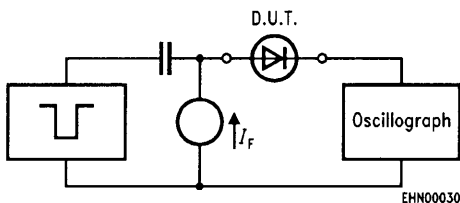
DC characteristics

| | | | | | |
|--|------------|-----|---|----------|---------------|
| Breakdown voltage $I_{(BR)} = 100\text{ }\mu\text{A}$ | $V_{(BR)}$ | | | | V |
| BAW 79 A | | 50 | – | – | |
| BAW 79 B | | 100 | – | – | |
| BAW 79 C | | 200 | – | – | |
| BAW 79 D | | 400 | – | – | |
| Forward voltage ¹⁾ $I_F = 1\text{ A}$ $I_F = 2\text{ A}$ | V_F | – | – | 1.6 2 | V |
| Reverse current $V_R = V_{Rmax}$ $V_R = V_{Rmax}, T_A = 150\text{ }^\circ\text{C}$ | I_R | – | – | 1 50 | μA |

AC characteristics

| | | | | | |
|---|----------|---|----|---|---------------|
| Diode capacitance $V_R = 0\text{ V}, f = 1\text{ MHz}$ | C_D | – | 10 | – | pF |
| Reverse recovery time $I_F = 200\text{ mA}, I_R = 200\text{ mA},$ $R_L = 100\text{ }\Omega$ measured at $I_R = 20\text{ mA}$ | t_{rr} | – | 1 | – | μs |

Test circuit for reverse recovery time



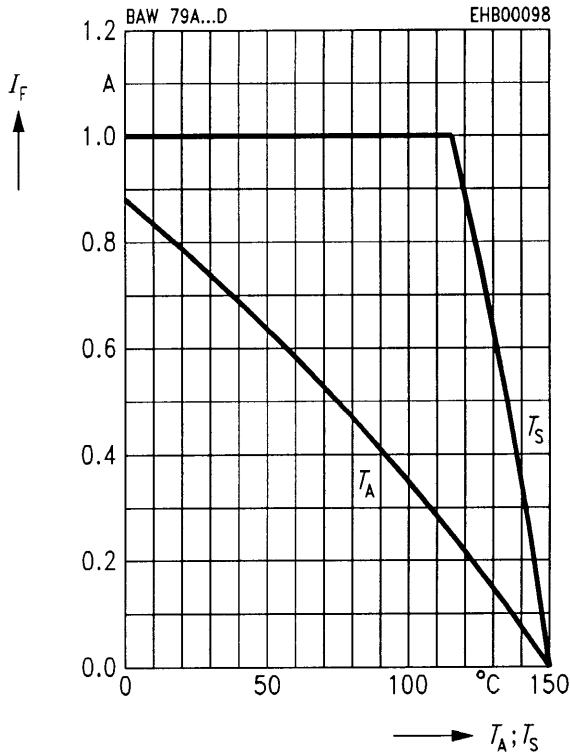
Pulse generator: $t_p = 5\text{ }\mu\text{s}, D = 0.05$
 $t_r = 0.6\text{ ns}, R_j = 50\text{ }\Omega$

Oscillograph: $R = 50\text{ }\Omega$
 $t_r = 0.35\text{ ns}$
 $C \leq 1\text{ pF}$

¹⁾ Pulse test: $t_p \leq 300\text{ }\mu\text{s}, D = 2\text{ }\%$.

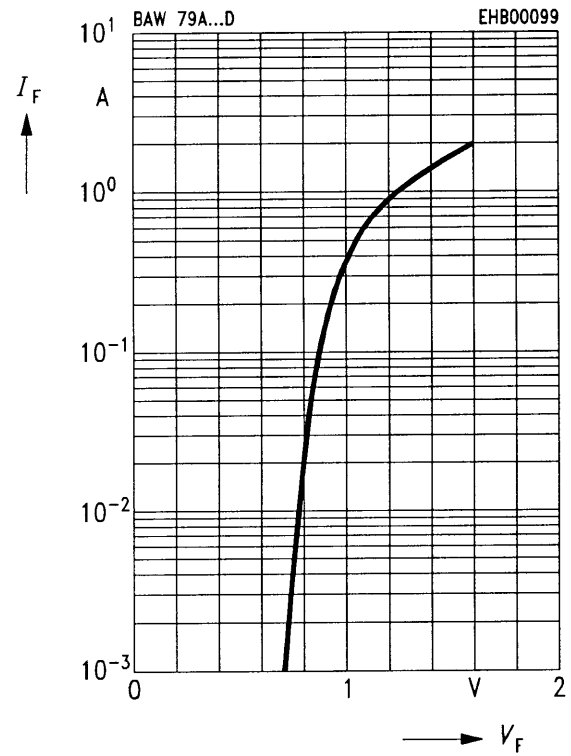
Forward current $I_F = f(T_A^*; T_S)$

* Package mounted on epoxy



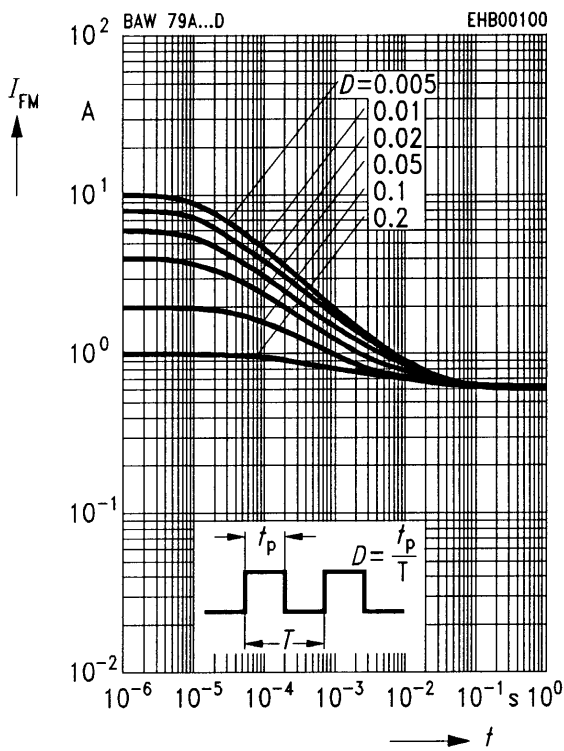
Forward current $I_F = f(V_F)$

$T_A = 25\text{ °C}$



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

$T_A = 25\text{ °C}$



Reverse current $I_R = f(T_A)$

$V_R = V_{Rmax}$

