# SIEMENS

Silicon Switching Diode Array   BAV 99

● For high-speed switching
● Connected in series

5:1
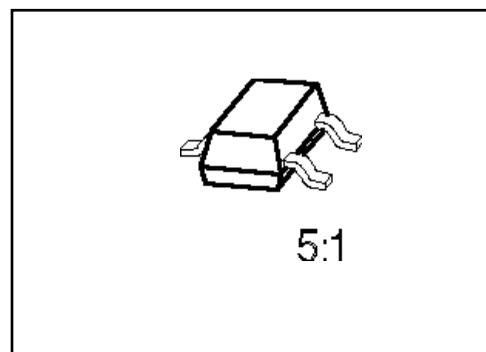
Type	Marking	Ordering Code (tape and reel)	Pin Configuration	Package[1]
BAV 99	A7s	Q68000-A549		SOT-23

Maximum Ratings per Diode

Parameter	Symbol	Values	Unit
Reverse voltage	V_R	70	V
Peak reverse voltage	V_{RM}	70	
Forward current	I_F	200	mA
Surge forward current, $t = 1\ \mu s$	I_{FS}	4.5	A
Total power dissipation, $T_S = 31\ °C$	P_{tot}	330	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	− 65 … + 150	

Thermal Resistance

	Symbol	Values	Unit
Junction - ambient[2]	$R_{th\ JA}$	≤ 500	K/W
Junction - soldering point	$R_{th\ JS}$	≤ 360	

---

[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 $I_{(BR)} = 100\ \mu A$	$V_{(BR)}$	70	–	–	V
Forward voltage $I_F = \quad 1$ mA $I_F = \quad 10$ mA $I_F = \quad 50$ mA $I_F = 150$ mA	V_F	– – – –	– – – –	715 855 1000 1250	mV
Reverse current $V_R = 70$ V $V_R = 25$ V, $T_A = 150\ °C$ $V_R = 70$ V, $T_A = 150\ °C$	I_R	– – –	– – –	2.5 30 50	μA
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, $R_L = 100\ \Omega$ measured at $I_R = 1$ mA	t_{rr}	–	–	6	ns

Test circuit for reverse recovery time

D.U.T.

Oscillograph

EHN00025
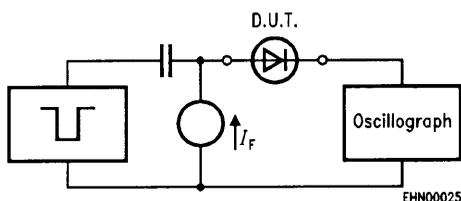
Pulse generator: $t_p = 100$ ns, $D = 0.05$ Oscillograph: $R = 50\ \Omega$

                 $t_r = 0.6$ ns, $R_j = 50\ \Omega$ $t_r = 0.35$ ns

                                                       $C \leq 1$ pF

Forward current $I_F = f(T_A*; T_S)$
* Package mounted on epoxy
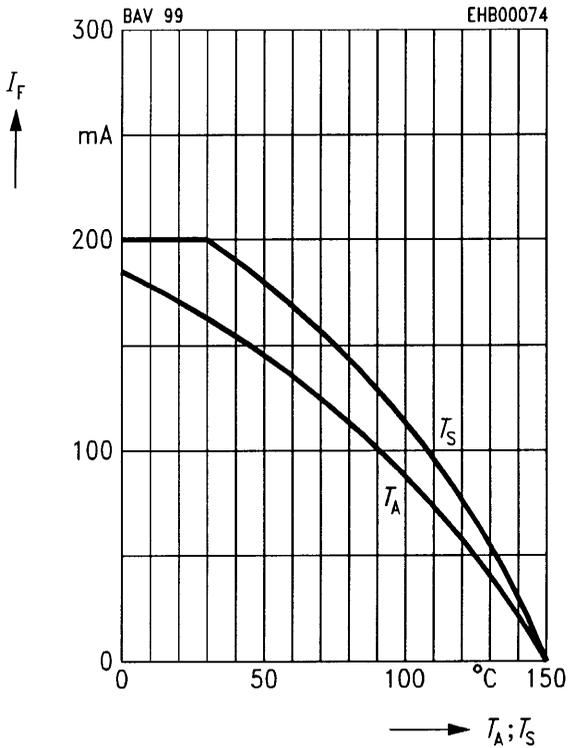
**Reverse current** $I_R = f(T_A)$
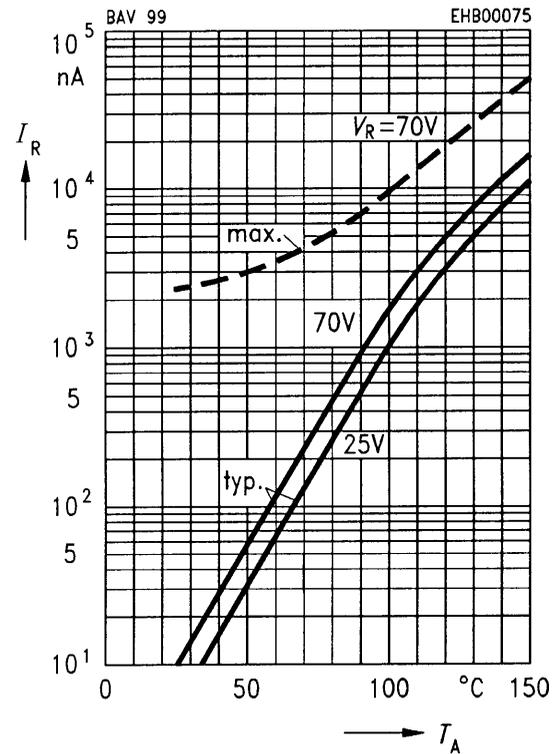
Forward current $I_F = f(V_F)$
$T_A = 25\ °C$
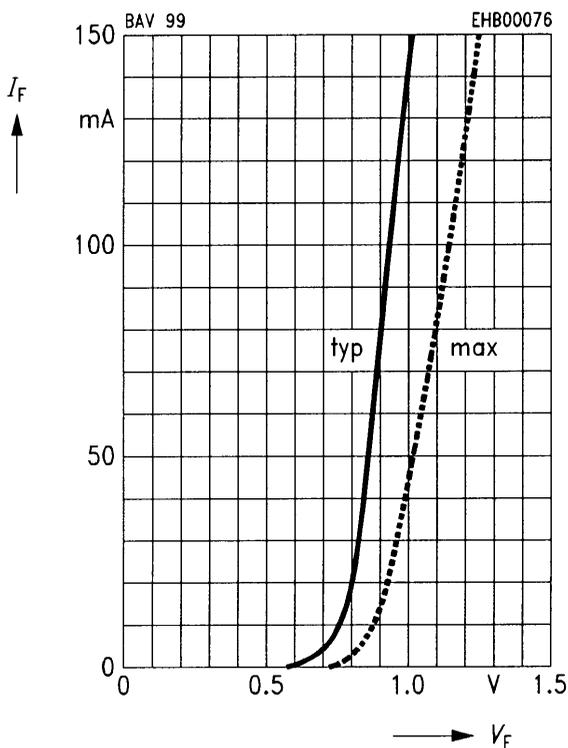
Peak forward current $I_{FM} = f(t)$
$T_A = 25\ °C$

Forward voltage $V_F = f(T_A)$