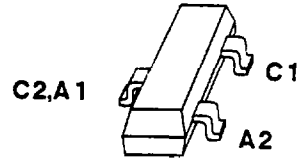## Silicon Switching Diode Array

BAV 99

● For high-speed switching
● Connected in series

C2,A1 C1 A2

Type	Marking	Ordering code for versions in bulk	Ordering code for versions on 8 mm-tape	Package
⑤ BAV 99	A7	Q68000–A1185	Q68000–A549	SOT 23

Maximum ratings per diode

Parameter	Symbol	Ratings	Unit
Reverse voltage	V_R	70	V
Peak reverse voltage	V_{RM}	70	V
Forward current	I_F	250	mA
Peak forward current	I_{FM}	250	mA
Surge forward current $t = 1\ \mu s$	I_{FS}	4,5	A
Total power dissipation $T_A = 25°C$	P_{tot}	330	mW
Junction temperature	T_j	175	°C
Storage temperature range	T_{stg}	$-65 ... +150$	°C
Thermal resistance junction - ambient package mounted on alumina 15 mm × 16.7 mm × 0.7 mm	R_{thJA}	≤ 450	K/W

⑤ Preferred type

Siemens

Electrical characteristics per diode

at $T_A = 25\,°C$, unless otherwise specified

DC characteristics	Symbol	min	typ	max	Unit
Breakdown voltage $I_{(BR)} = 100\ \mu A$	$V_{(BR)}$	70	–	–	V
Forward voltage	V_F				
$I_F = \ \ 1\ mA$		–	–	715	mV
$I_F = \ \ 10\ mA$		–	–	855	mV
$I_F = \ \ 50\ mA$		–	–	1000	mV
$I_F = 150\ mA$		–	–	1250	mV
Reverse current	I_R				
$V_R = 70\ V$		–	–	2,5	μA
$V_R = 25\ V,\ T_A = 150\,°C$		–	–	30	μA
$V_R = 70\ V,\ T_A = 150\,°C$		–	–	50	μA

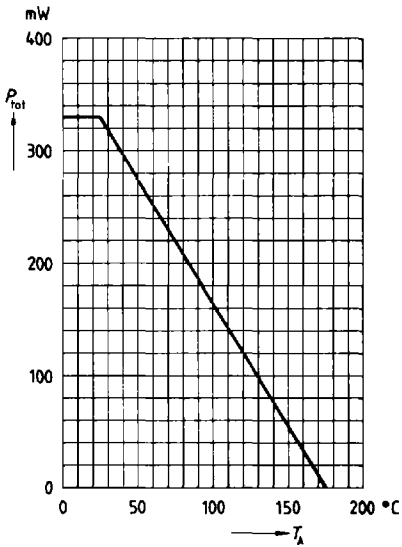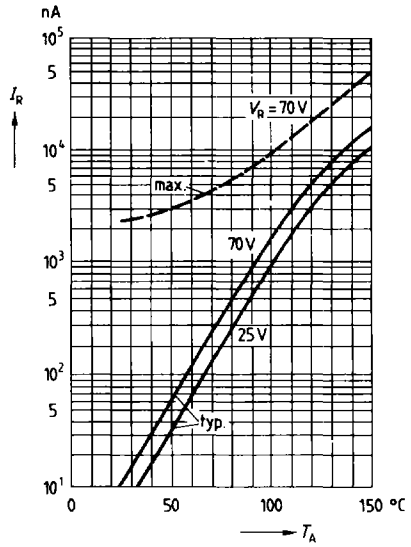| AC characteristics	Symbol	min	typ	max	Unit
Diode capacitance $V_R = 0\ V,\ f = 1\ MHz$	C_D	–	–	1,5	pF
Reverse recovery time $I_F = 10\ mA,\ I_R = 10\ mA$ $R_L = 100\ \Omega,$ measured at $I_R = 1\ mA$	t_{rr}	–	–	6	ns

Test circuit for reverse recovery time
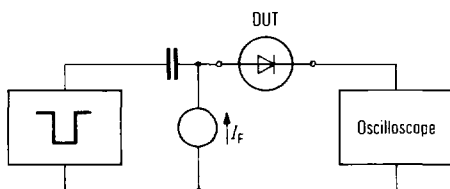
Pulse generator: $t_p = 100$ ns, D = 0,05
$t_r = 0,6$ ns, $R_i = 50\ \Omega$

Oscilloscope: $R = 50\ \Omega$
$t_r = 0,35$ ns
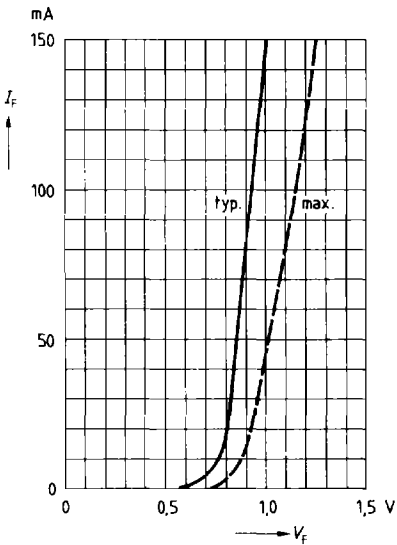$C \le 1$ pF

Total power dissipation $P_{tot} = f(T_A)$

Reverse current $I_R = f(T_A)$

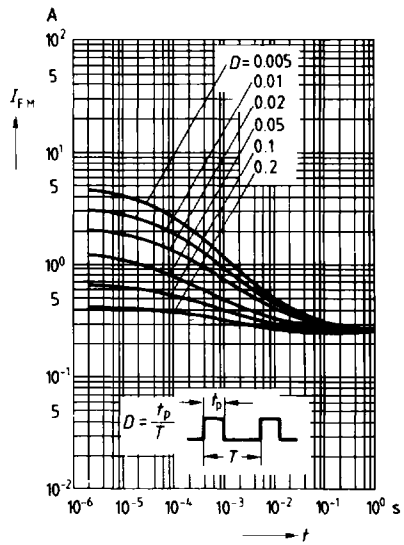**Forward current** $I_F = f(V_F)$
$T_A = 25\,°C$

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

$D = \dfrac{t_p}{T}$

Siemens

Forward voltage $V_F = f(T_A)$