SIEMENS

Silicon Switching Diode Array

BAW 56

● For high-speed switching applications

● Common anode

Type	Marking	Ordering Code (tape and reel)	Pin Configuration	Package[1]
BAW 56	A1s	Q62702-A688		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}	$-65 \ldots +150$	

Thermal Resistance

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

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[1] For detailed information see chapter Package Outlines.

[2] Package mounted on epoxy pcb 40 mm $\times$ 40 mm $\times$ 1.5 mm/6 cm^2 Cu.

Electrical Characteristics per Diode

at T_A = 25 ˚C, unless otherwise specified.

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

DC characteristics
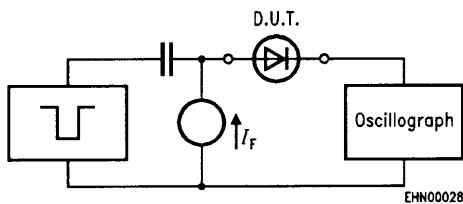
Parameter	Symbol	min.	typ.	max.	Unit
Breakdown voltage $I_{(BR)}$ = 100 µA	$V_{(BR)}$	70	–	–	V
Forward voltage I_F = 1 mA I_F = 10 mA I_F = 50 mA I_F = 150 mA	V_F	 – – – –	 – – – –	 715 855 1000 1250	mV
Reverse current V_R = 70 V V_R = 25 V, T_A = 150 ˚C V_R = 70 V, T_A = 150 ˚C	I_R	 – – –	 – – –	 2.5 30 50	µA

AC characteristics

Parameter	Symbol	min.	typ.	max.	Unit
Diode capacitance V_R = 0 V, f = 1 MHz	C_D	–	–	2	pF
Reverse recovery time I_F = 10 mA, I_R = 10 mA, R_L = 100 Ω measured at I_R = 1 mA	t_{rr}	–	–	6	ns

Test circuit for reverse recovery time
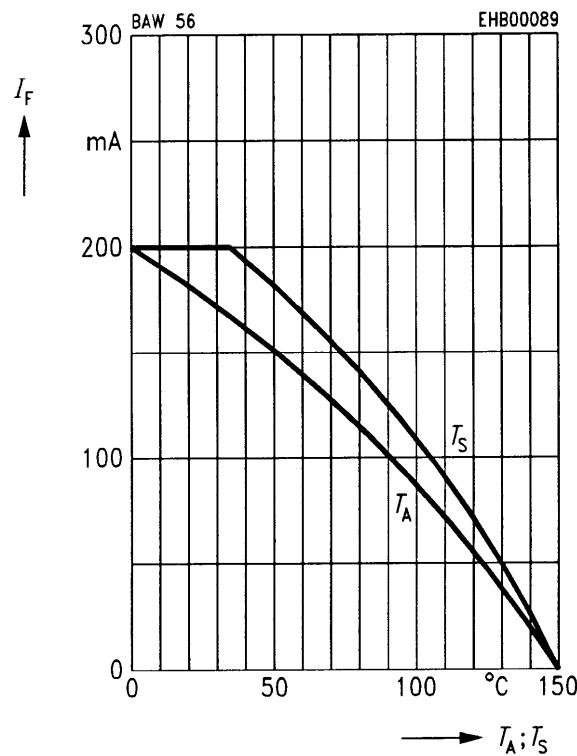
Pulse generator: t_p = 100 ns, D = 0.05   Oscillograph: R = 50 Ω
          t_r = 0.6 ns, R_j = 50 Ω t_r = 0.35 ns
                            $C \leq 1$ pF
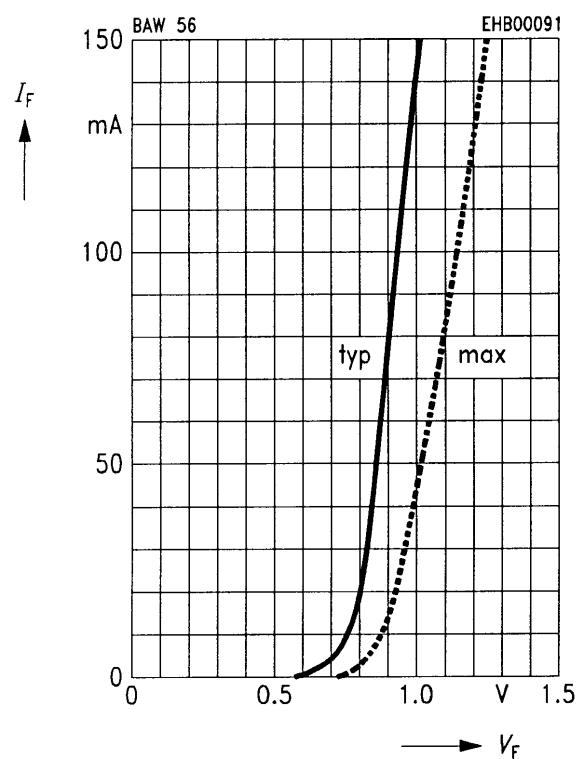
## Forward current $I_F = f(T_A{}^*; T_S)$
* Package mounted on epoxy

Reverse current $I_R = f(T_A)$
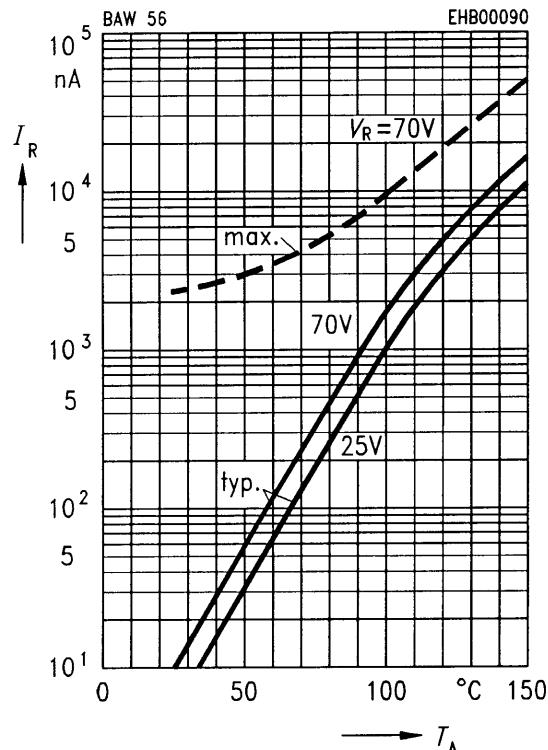
Forward current $I_F = f(V_F)$
$T_A = 25\ °C$
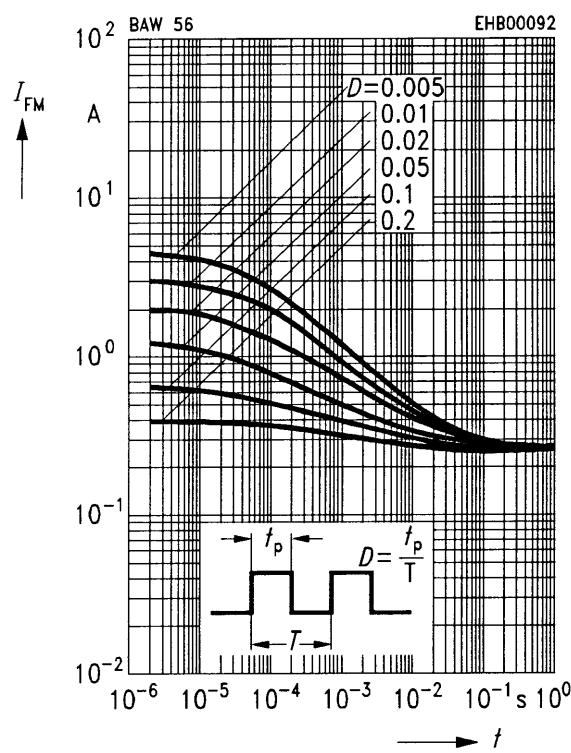
Peak forward current $I_{FM} = f(t)$
$T_A = 25\ °C$

Forward voltage $V_F = f\,(T_A)$