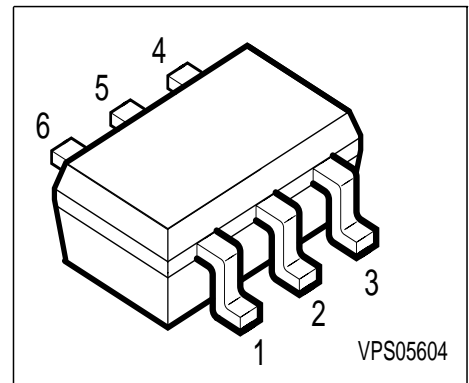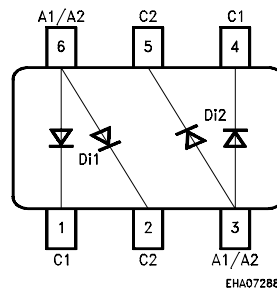# SIEMENS

BAW 56S

Silicon Switching Diode Array

- For high-speed switching applications
- Common anode
- Internal (galvanic) isolated Diodes
  in one package

Type	Marking	Ordering Code	Pin Configuration			Package
BAW 56S	A1s	Q62702-A1253	1/4 = C1	2/5 = C2	3/6 = A1/2	SOT-363

Maximum Ratings

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	70	V
Peak reverse voltage	V_{RM}	70	
Forward current	I_F	200	mA
Surge forward current, t = 1 µs	I_{FS}	4.5	A
Total power dissipation, T_S = 85 °C	P_{tot}	250	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	65 ...+150	

Thermal Resistance

Junction - ambient [1]	R_{thJA}	≤ 530	K/W
Junction - soldering point	R_{thJS}	≤ 260	

1) Package mounted on epoxy pcb 40mm x 40mm x 1.5mm / 0.5cm^2 Cu

SIEMENS

Electrical Characteristics 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	V_F				mV
$I_F = 1$ mA		-	-	715	
$I_F = 10$ mA		-	-	855	
$I_F = 50$ mA		-	-	1000	
$I_F = 150$ mA		-	-	1250	
Reverse current $V_R = 70$ V	I_R	-	-	2.5	µA
Reverse current $V_R = 25$ V, $T_A = 150\ °C$ $V_R = 70$ V, $T_A = 150\ °C$	I_R	- -	- -	30 50	nA
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

EHN00019
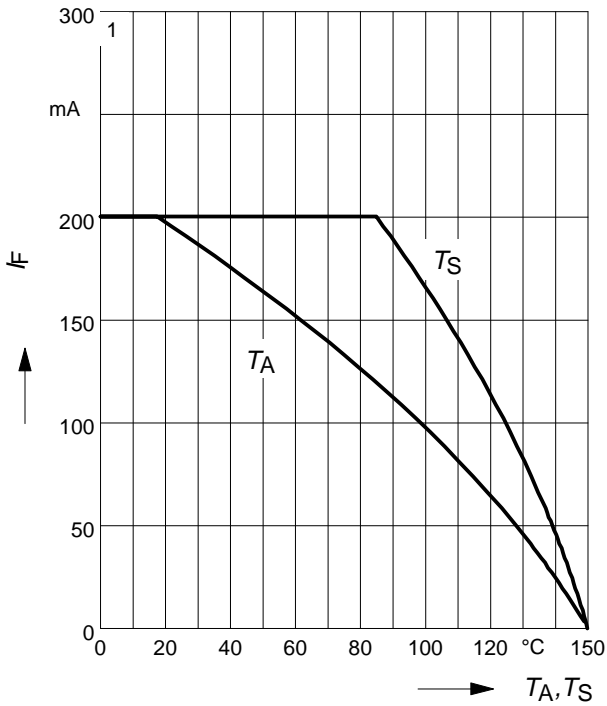
Pulse generator: $t_p = 100$ns, $D = 0.05$, $t_r = 0.6$ns, $R_i = 50\Omega$

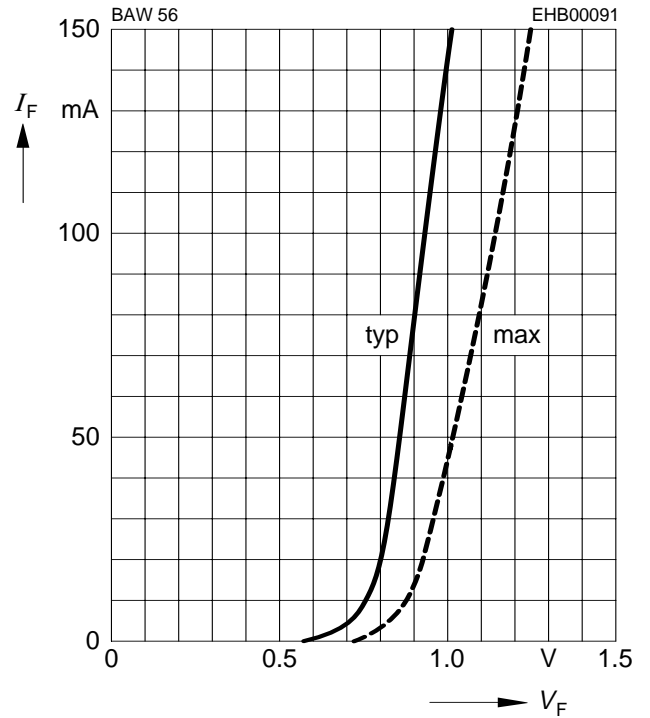Oscillograph: $R = 50\Omega$, $t_r = 0.35$ns, $C \leq 1$pF

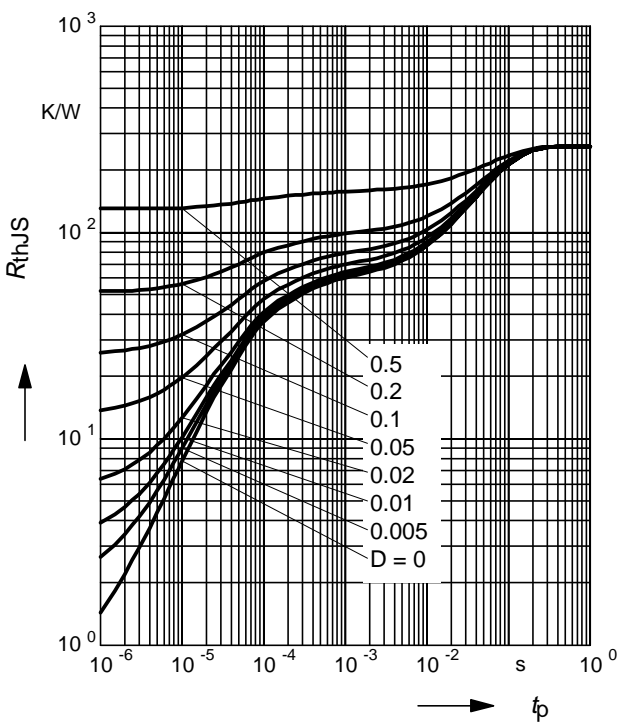**Forward current** $I_F = f(T_A*; T_S)$

* Package mounted on epoxy

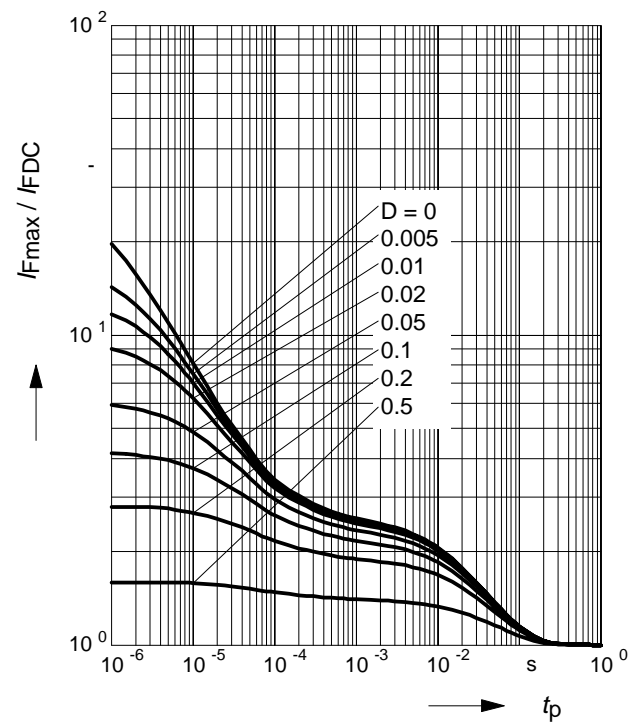**Forward current** $I_F = f\,V_F$

$T_A = 25°C$

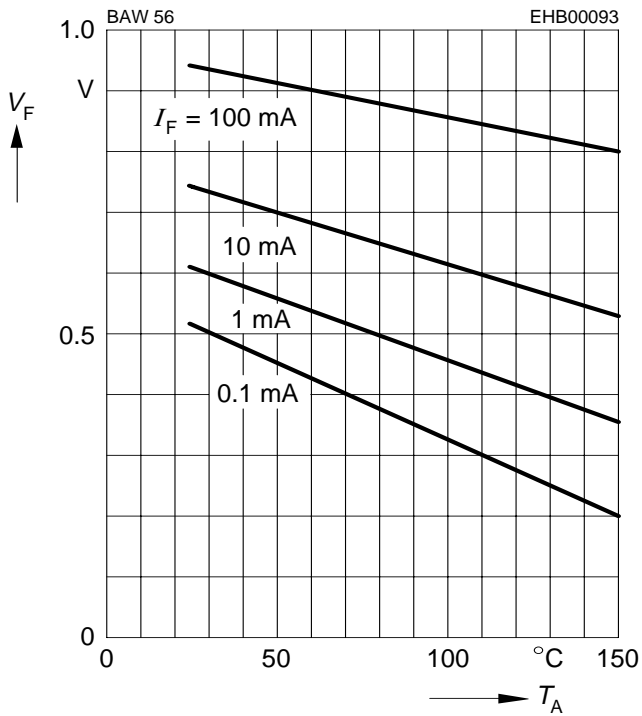**Permissible Pulse Load** $R_{thJS} = f(t_p)$

Permissible Pulse Load

$I_{Fmax} / I_{FDC} = f(t_p)$

Forward voltage $V_F = f(T_A)$

Reverse current $I_R = f(T_A)$

BAW 56 EHB00093

V_F V

$I_F = 100$ mA

10 mA

1 mA

0.1 mA

BAW 56 EHB00090

I_R nA

$V_R = 70$ V

max.

70 V

25 V

typ.