Silicon Switching Diode Array

- For high-speed switching applications
- Common anode

VPS05161

EHA07006
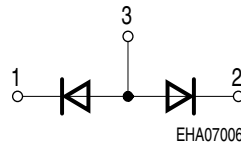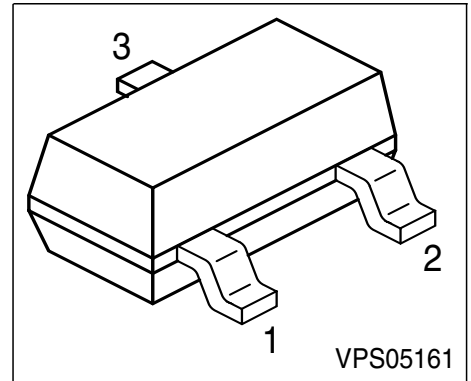
Type	Marking	Pin Configuration			Package
BAW 56	A1s	1 = C1	2 = C2	3=A1/A2	SOT-23

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 = 31 °C	P_{tot}	330	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-65 ... 150	

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - ambient [1]	R_{thJA}	≤ 500	K/W
Junction - soldering point	R_{thJS}	≤ 360	

1) Package mounted on epoxy pcb 40mm x 40mm x 1.5mm / 6cm^2 Cu

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Electrical Characteristics at T_A = 25°C, unless otherwise specified.

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC characteristics					
Breakdown voltage $I_{(BR)}$ = 100 µA	$V_{(BR)}$	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	I_R	-	-	30	
V_R = 70 V		-	-	50	
AC characteristics					
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 = 1mA	t_{rr}	-	-	6	ns

Test circuit for reverse recovery time

EHN00019
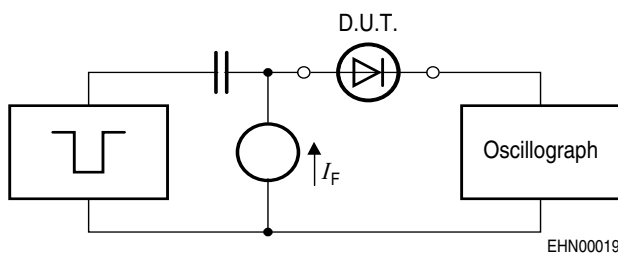
Pulse generator: t_p = 100ns, D = 0.05, t_r = 0.6ns, R_i = 50Ω

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

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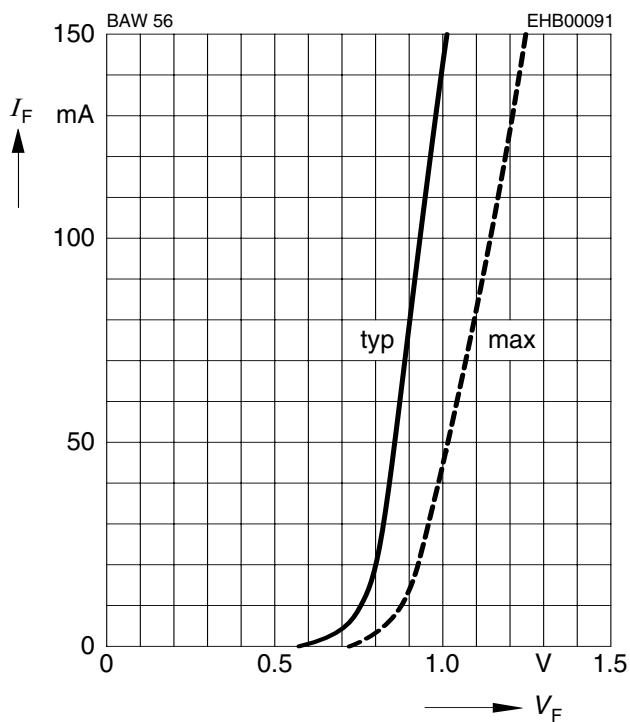**Forward current** $I_F = f(T_A{}^*; T_S)$

* Package mounted on epoxy
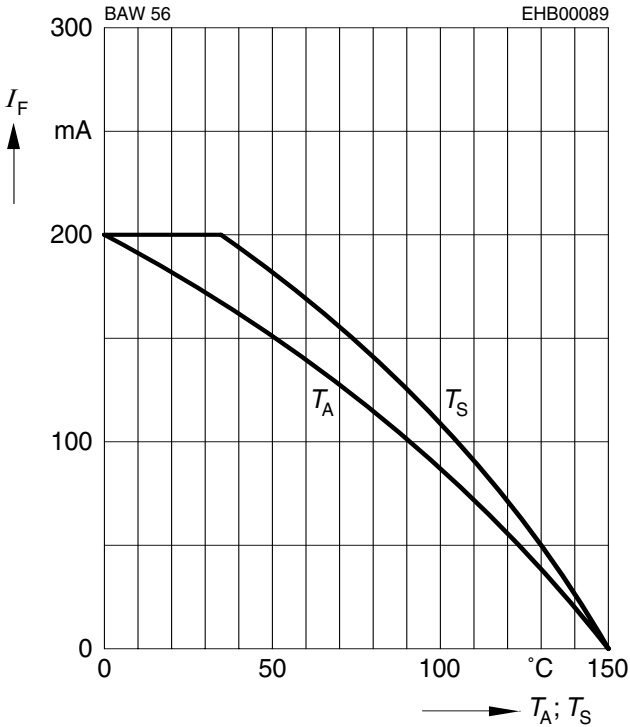
Reverse current $I_R = f(T_A)$
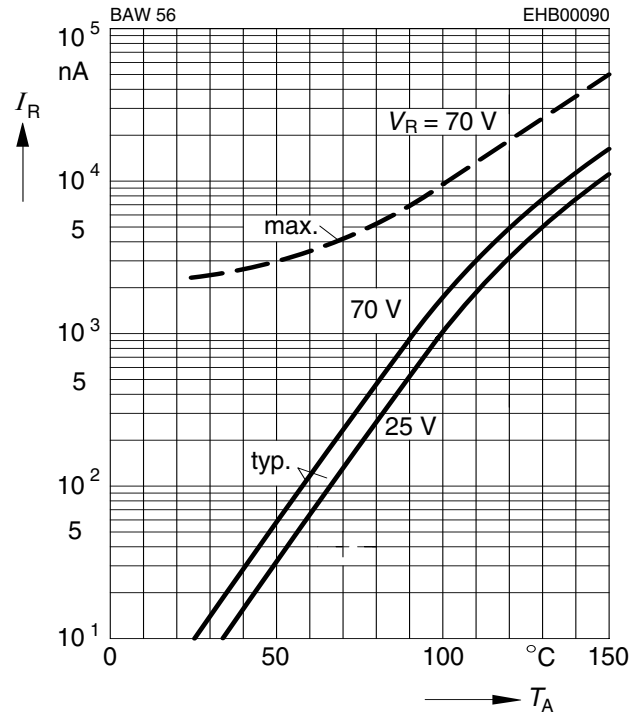
Forward current $I_F = f(V_F)$

$T_A = 25°C$

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

$T_A = 25°C$

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Forward voltage $V_F = f(T_A)$

BAW 56   EHB00093

$I_F = 100$ mA

10 mA

1 mA

0.1 mA

V_F

T_A

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