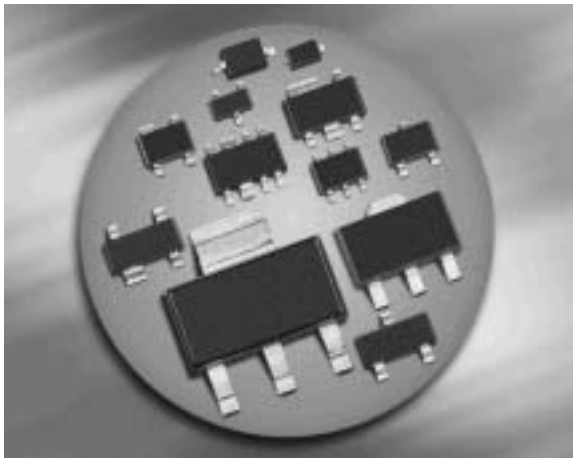
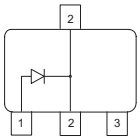
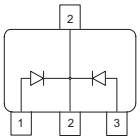
Silicon Switching Diodes

- Switching applications
- High breakdown voltage
- Pb-free (RoHS compliant) package[1)]
- Qualified according AEC Q101



BAW78D **BAW79D**





Type	Package	Configuration	Marking
BAW78D	SOT89	single	GD
BAW79D	SOT89	common cathode	GH

Maximum Ratings at T_A = 25°C, unless otherwise specified

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	400	V
Peak reverse voltage	V_{RM}	400	
Forward current	I_F	1	A
Peak forward current	I_{FM}	1	
Peak forward current	I_{FM}	1	
Surge forward current, t = 1 µs	I_{FS}	10	
Non-repetitive peak surge forward current	I_{FSM}	-	
Total power dissipation BAW78D, $T_S \leq$ 125°C BAW79D, $T_S \leq$ 115°C	P_{tot}	 1 1	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-65 ... 150	

[1]Pb-containing package may be available upon special request

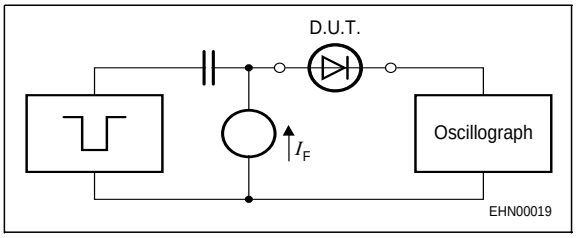
Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point[1)]	R_{thJS}		K/W
BAW78D		≤ 25	
BAW79D		≤ 35	

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	$V_{(BR)}$	400	-	-	V
Reverse current	I_R	-	-		µA
V_R = 400 V		-	-	1	
V_R = 400 V, T_A = 150 °C				50	
Forward voltage	V_F				V
I_F = 1 A		-	-	1.6	
I_F = 2 A		-	-	2	
AC Characteristics					
Diode capacitance V_R = 0 V, f = 1 MHz	C_T	-	10	-	pF
Reverse recovery time I_F = 200mA, I_R = 200mA, measured at I_R = 20mA R_L = 100Ω	t_{rr}	-	1 ,	-	µs

Test circuit for reverse recovery time



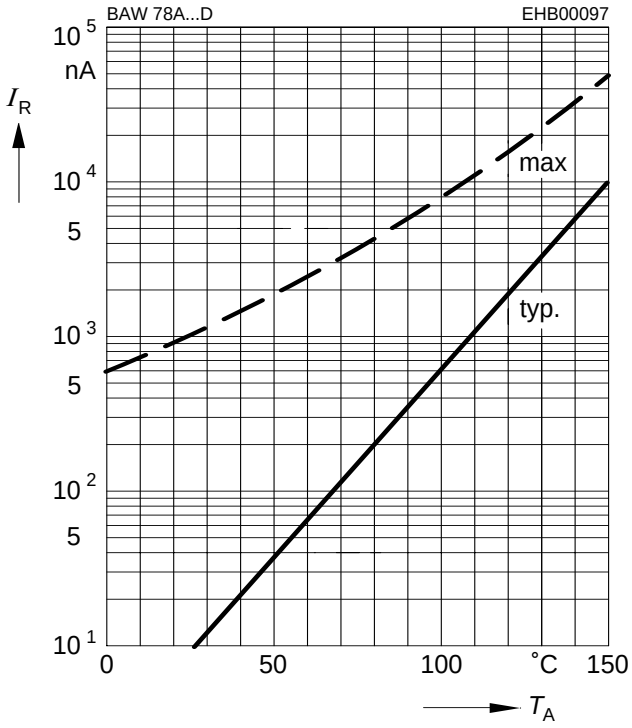
Puls generator: t_p = 10µs, D = 0.05,
t_r = 0.6ns, R_i = 50Ω

Oscillograp: R = 50Ω, t_r = 0.35ns
C ≤ 1pF

[1]For calculation of R_{thJA} please refer to Application Note Thermal Resistance

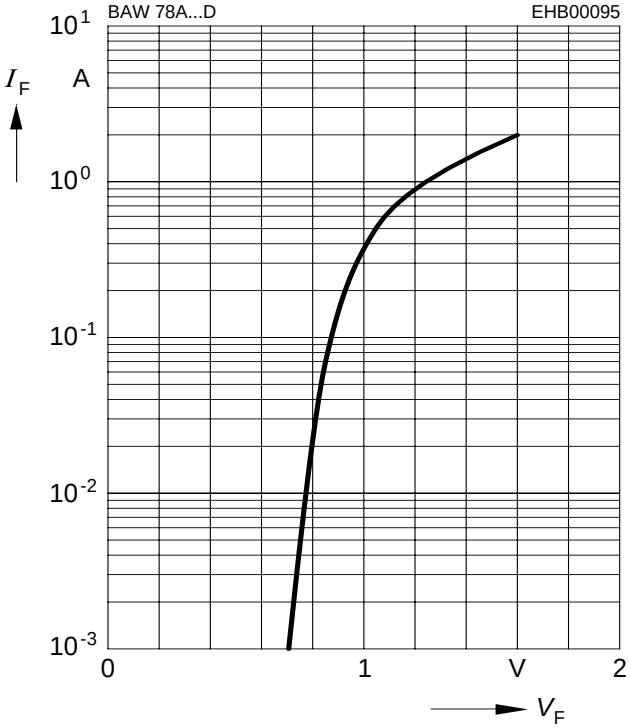
Reverse current $I_R = f(T_A)$

V_R = 400V

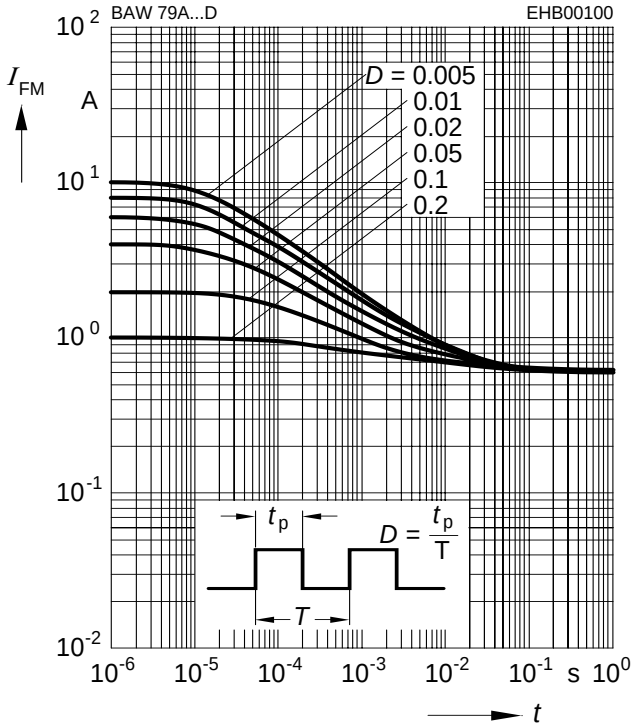


Forward current $I_F = f(V_F)$

T_A = 25°C

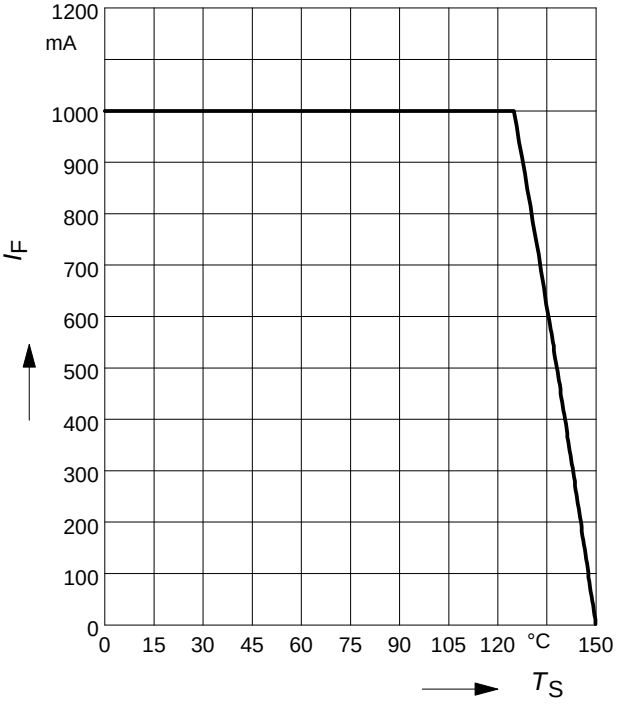


Peak forward current $I_{FM} = f(t_p)$



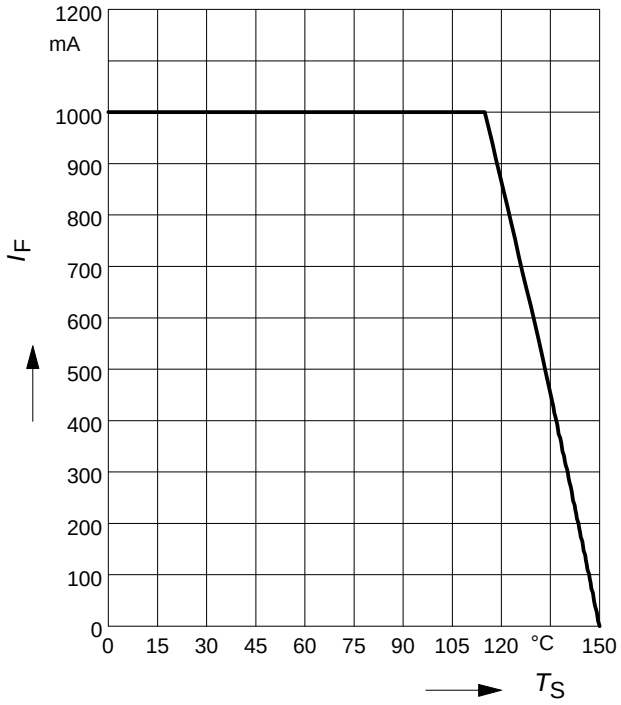
Forward current $I_F = f(T_S)$

BAW78D

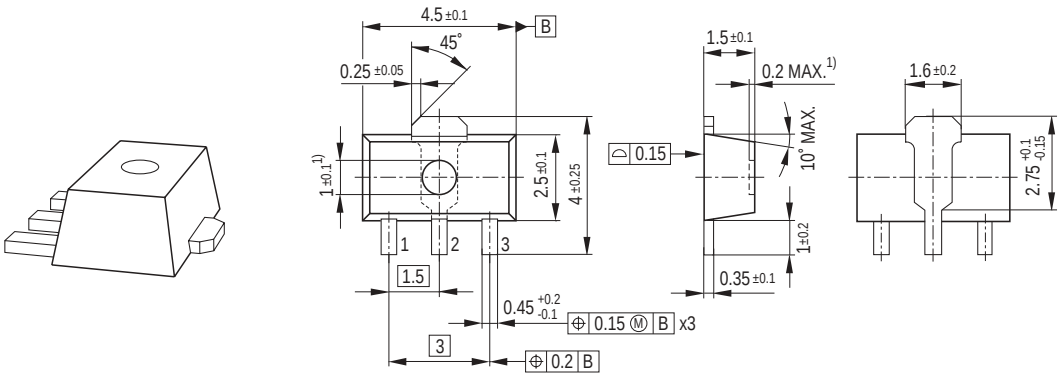


Forward current $I_F = f(T_S)$

BAW79D

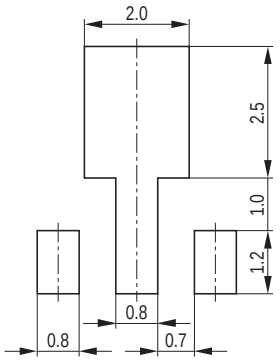


Package Outline

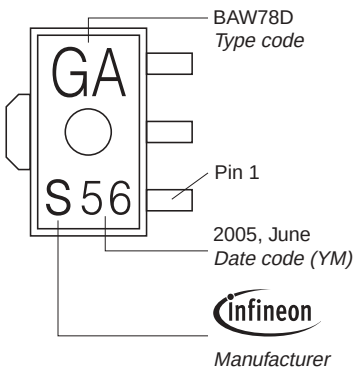


1) Ejector pin markings possible

Foot Print

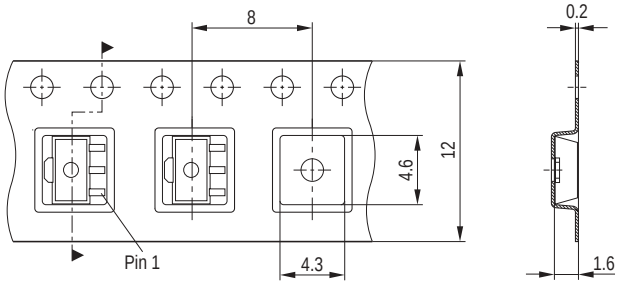


Marking Layout (Example)



Standard Packing

Reel ø180 mm = 1.000 Pieces/Reel
Reel ø330 mm = 4.000 Pieces/Reel



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