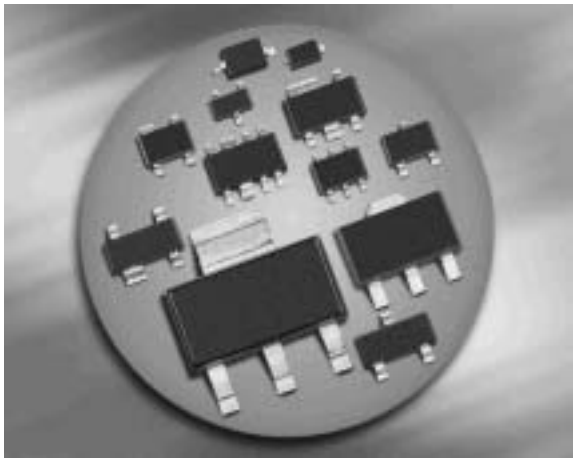
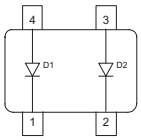
Silicon Switching Diode

- Electrically insulated high-voltage medium-speed diodes
- Pb-free (RoHS compliant) package[1)]
- Qualified according AEC Q101



BAW101



Type	Package	Configuration	Marking
BAW101	SOT143	parallel	JPs

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

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	300	V
Peak reverse voltage	V_{RM}	300	
Forward current	I_F	250	mA
Peak forward current	I_{FM}	500	
Peak forward current	I_{FM}	500	mA
Surge forward current, t = 1 µs	I_{FS}	4.5	A
Non-repetitive peak surge forward current	I_{FSM}	-	
Total power dissipation $T_S \leq 35$°C	P_{tot}	350	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-65 ... 150	

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

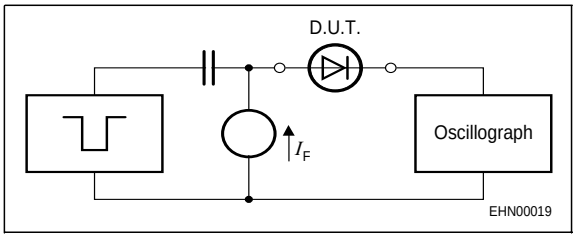
Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point[1)] BAW101	R_{thJS}	≤ 330	K/W

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	$V_{(BR)}$	300	-	-	V
Reverse current	I_R				µA
V_R = 250 V		-	-	0.15	
V_R = 250 V, T_A = 150 °C		-	-	50	
Forward voltage I_F = 100 mA	V_F	-	-	1.3	V
AC Characteristics					
Diode capacitance V_R = 0 V, f = 1 MHz	C_T	-	6	-	pF
Reverse recovery time I_F = 10 mA, I_R = 10 mA, measured at I_R = 1mA, R_L = 100 Ω	t_{rr}	-	1	-	µs

Test circuit for reverse recovery time



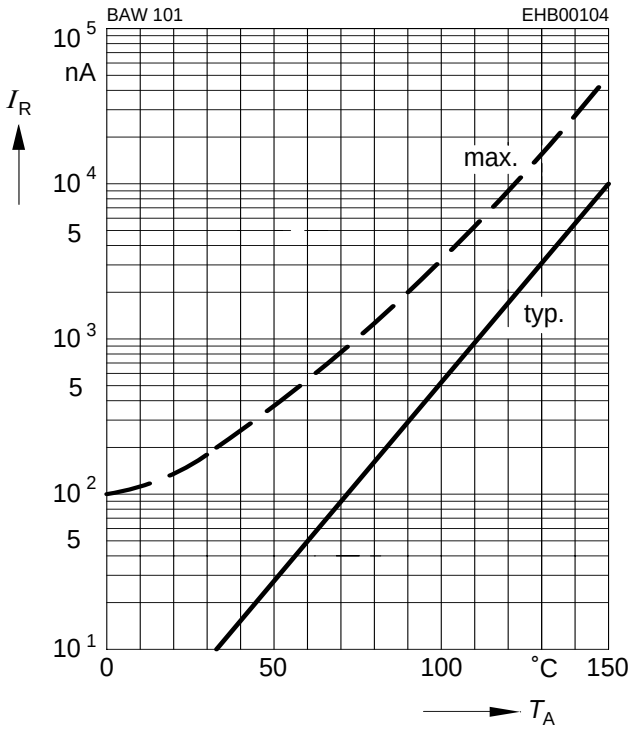
Pulse generator: t_p = 10µs, D = 0.05, t_r = 0.6ns, R_i = 50Ω

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

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

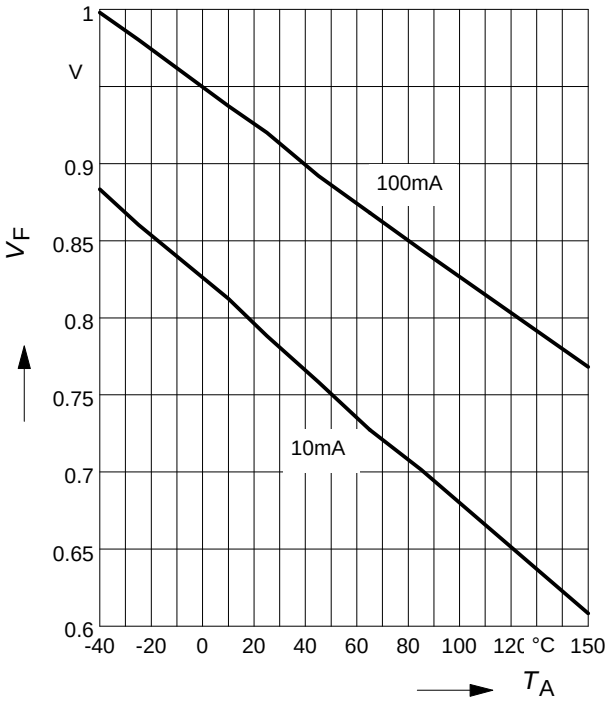
Reverse current $I_R = f(T_A)$

V_R = 250V



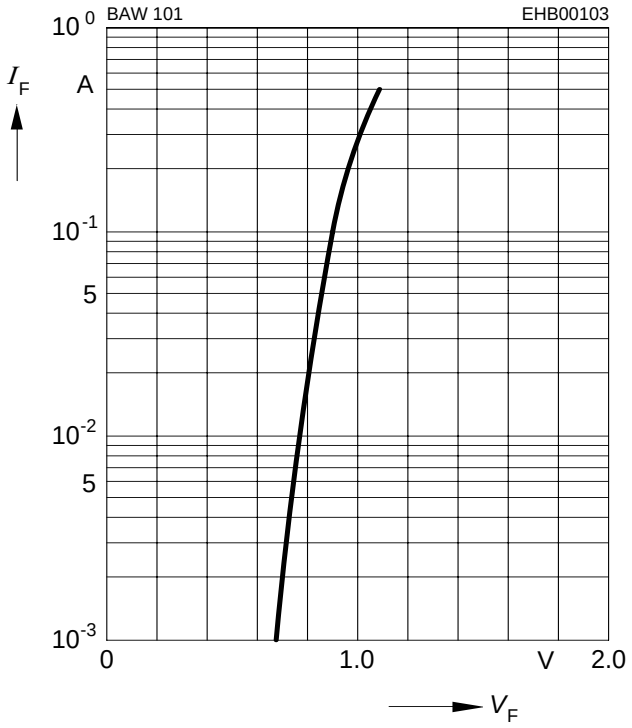
Forward Voltage $V_F = f(T_A)$

I_F = Parameter



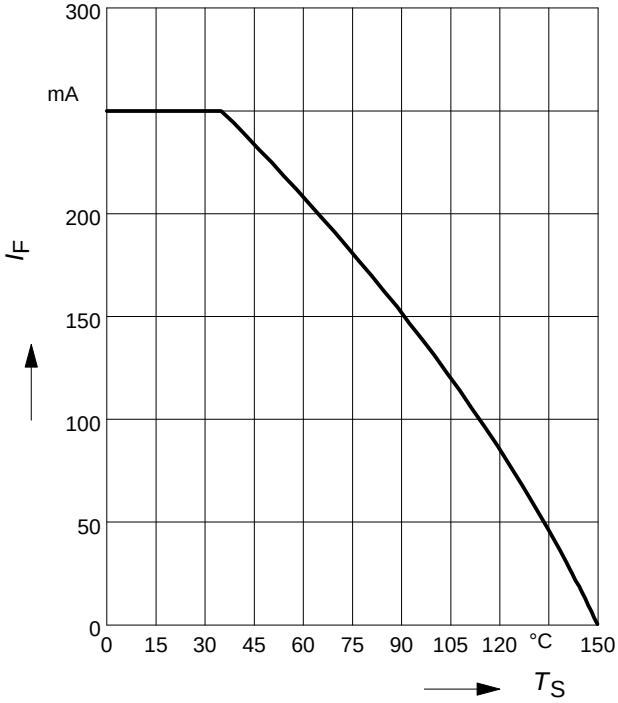
Forward current $I_F = f(V_F)$

T_A = 25°C

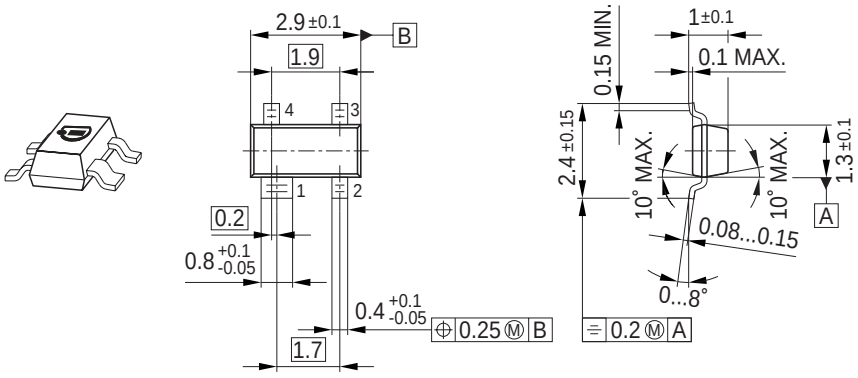


Forward current $I_F = f(T_S)$

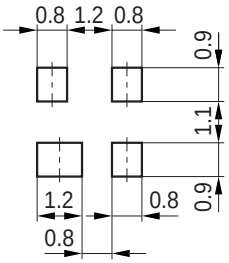
BAW101



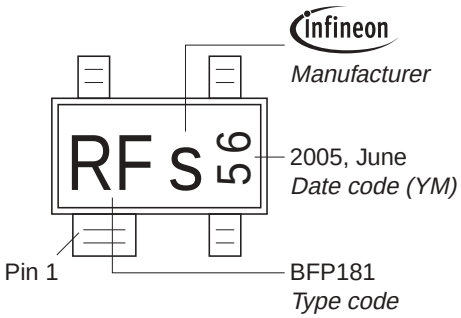
Package Outline



Foot Print

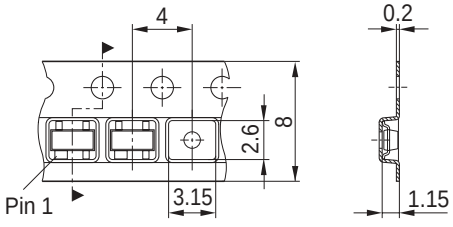


Marking Layout (Example)



Standard Packing

Reel ø180 mm = 3.000 Pieces/Reel
Reel ø330 mm = 10.000 Pieces/Reel



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