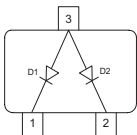


Silicon Low Leakage Diode

- Low-leakage applications
- Medium speed switching times
- Common anode configuration
- Pb-free (RoHS compliant) package¹⁾
- Qualified according AEC Q101



BAW156



Type	Package	Configuration	Marking
BAW156	SOT23	common anode	JZs

Maximum Ratings at $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	80	V
Peak reverse voltage	V_{RM}	85	
Forward current	I_F	200	mA
Non-repetitive peak surge forward current	I_{FSM}		A
$t = 1 \mu\text{s}$		4.5	
$t = 1 \text{ s}$		0.5	
Total power dissipation $T_S \leq 31^\circ\text{C}$	P_{tot}	250	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-65 ... 150	

Thermal Resistance

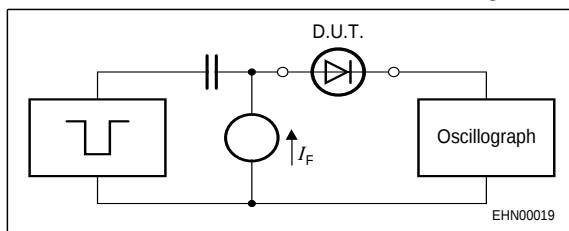
Parameter	Symbol	Value	Unit
Junction - soldering point ²⁾	R_{thJS}	≤ 360	K/W
BAW156			

¹⁾Pb-containing package may be available upon special request

²⁾For calculation of R_{thJA} please refer to Application Note Thermal Resistance

Electrical Characteristics at $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Breakdown voltage $I_{(BR)} = 100 \mu A$	$V_{(BR)}$	85	-	-	V
Reverse current $V_R = 75 V$ $V_R = 75 V, T_A = 150 ^\circ C$	I_R	- -	- -	5 80	nA
Forward voltage $I_F = 1 mA$ $I_F = 10 mA$ $I_F = 50 mA$ $I_F = 150 mA$	V_F	- - - -	- - - -	900 1000 1100 1250	mV
AC Characteristics					
Diode capacitance $V_R = 0 V, f = 1 MHz$	C_T	-	2	-	pF
Reverse recovery time $I_F = 10 mA, I_R = 10 mA$, measured at $I_R = 1mA$, $R_L = 100 \Omega$	t_{rr}	-	0.6	1.5	μs

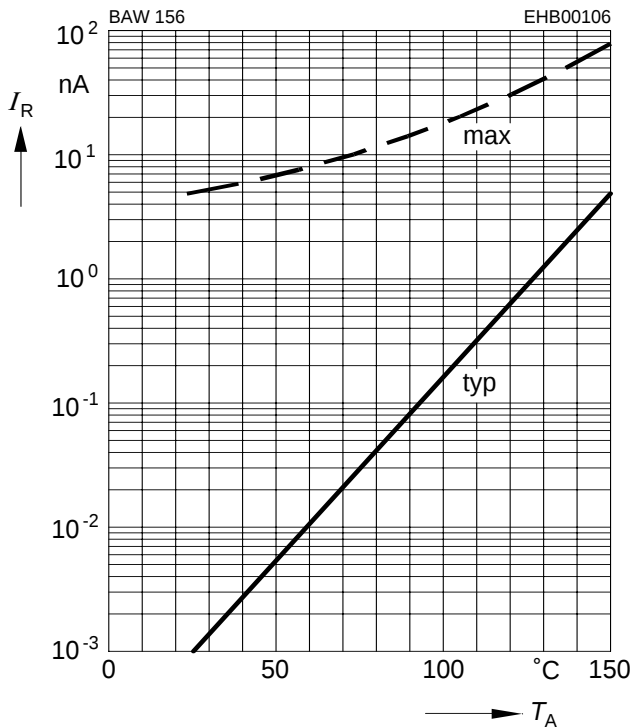
Test circuit for reverse recovery time


Pulse generator: $t_p = 10 \mu\text{s}$, $D = 0.05$, $t_r = 0.6 \text{ ns}$,
 $R_i = 50 \Omega$

Oscilloscope: $R = 50 \Omega$, $t_r = 0.35 \text{ ns}$, $C \leq 1 \text{ pF}$

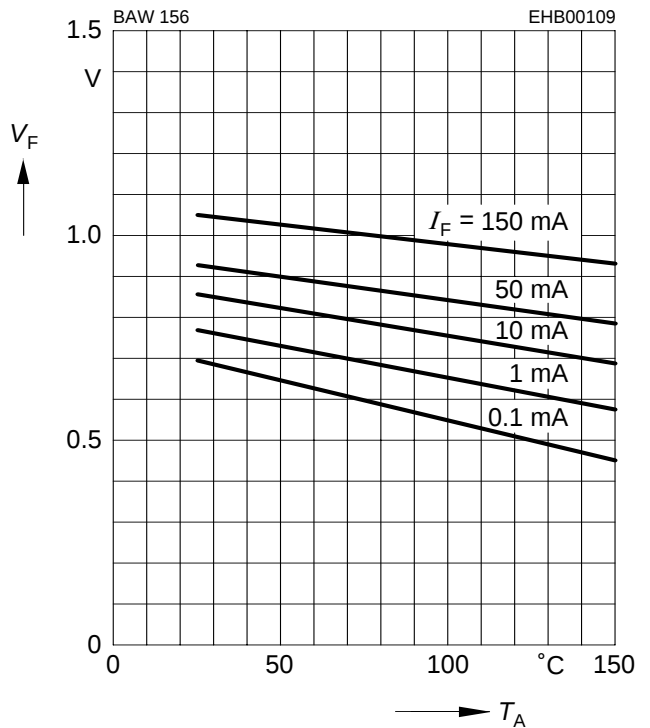
Reverse current $I_R = f(T_A)$

$V_R = 70V$



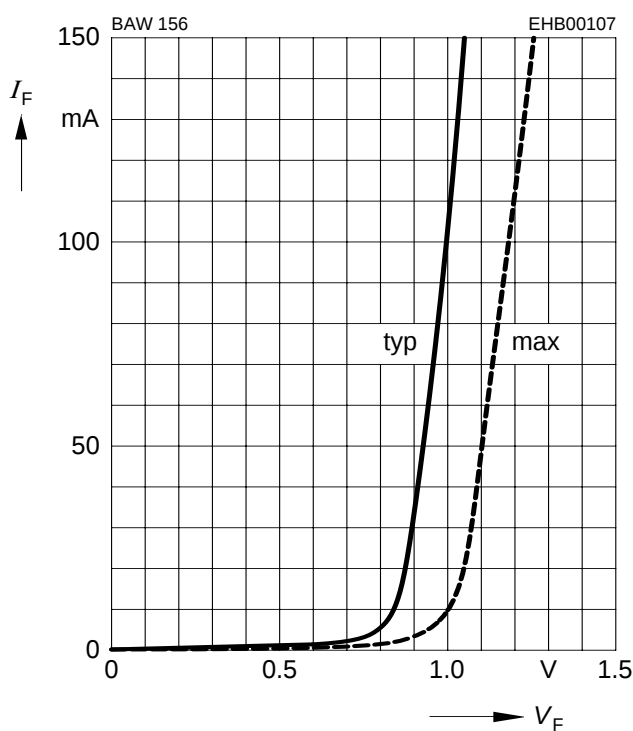
Forward Voltage $V_F = f(T_A)$

$I_F = \text{Parameter}$



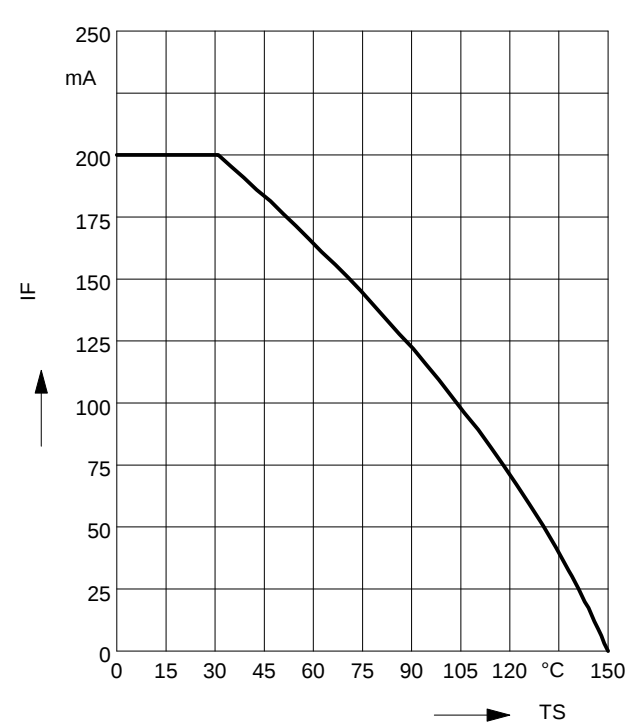
Forward current $I_F = f(V_F)$

$T_A = 25^\circ\text{C}$

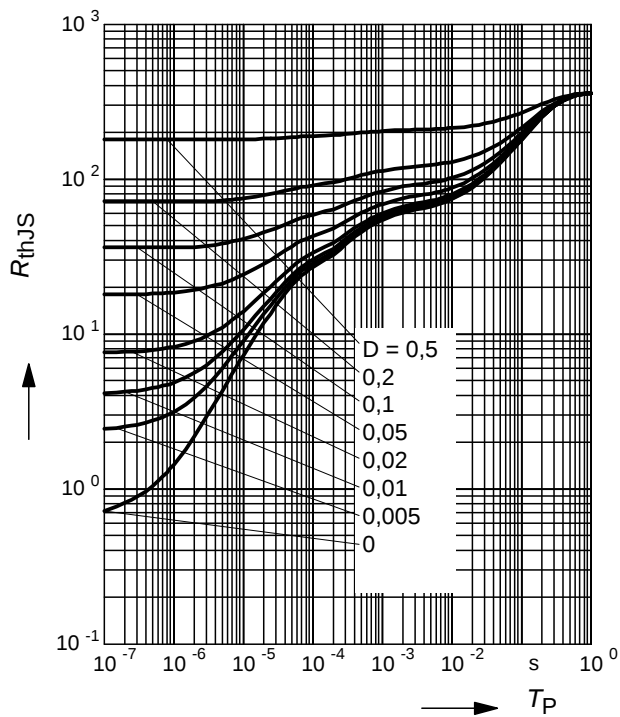


Forward current $I_F = f(T_S)$

BAW156

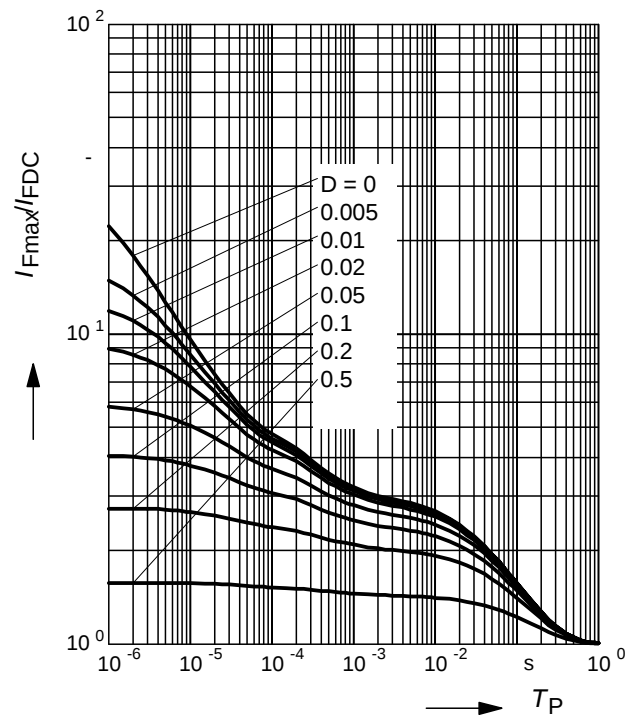


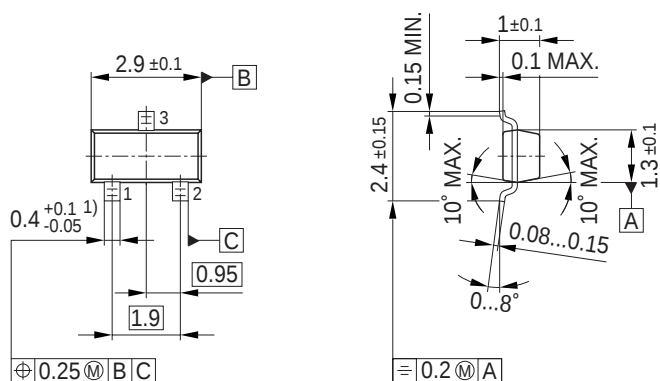
Permissible Puls Load $R_{thJS} = f(t_p)$



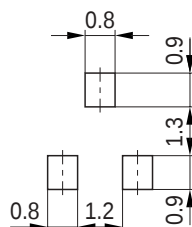
Permissible Pulse Load

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



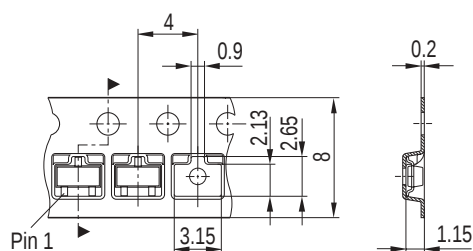


Foot Print



The diagram shows a top-down view of a BCW66 LED package. It is a rectangular component with four pins. The top pin is labeled 'Pin 1'. The package has a central rectangular area with the text 'EHS' and a date code '05 05' (representing 2005, June). The Infineon logo is at the top right. Labels with leader lines point to the Infineon logo (Manufacturer), the date code (Date code (YM)), and the BCW66 text (Type code).

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



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