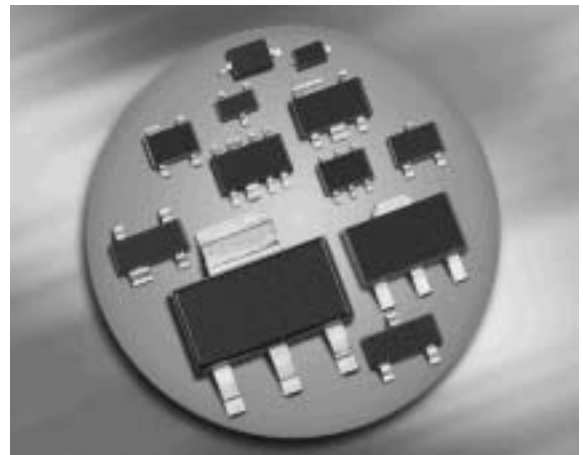
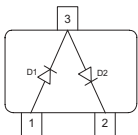


Silicon Low Leakage Diode

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



BAV199



Type	Package	Configuration	Marking
BAV199	SOT23	series	JYs

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 BAV199, $T_S \leq 31^\circ\text{C}$	P_{tot}	330	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-65 ... 150	

Thermal Resistance

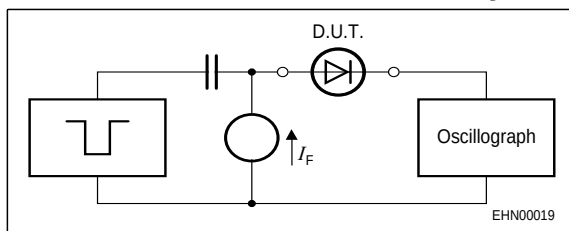
Parameter	Symbol	Value	Unit
Junction - soldering point ²⁾ BAV199	R_{thJS}	≤ 360	K/W

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

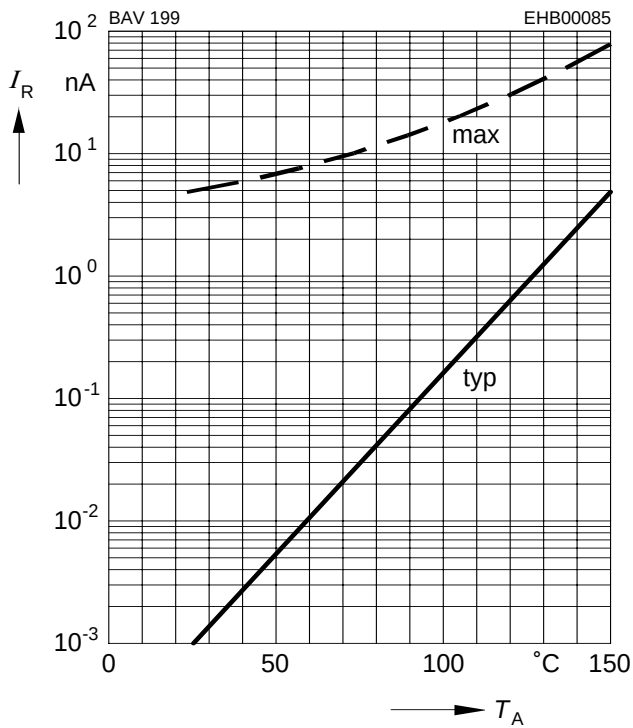
Test circuit for reverse recovery time


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

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

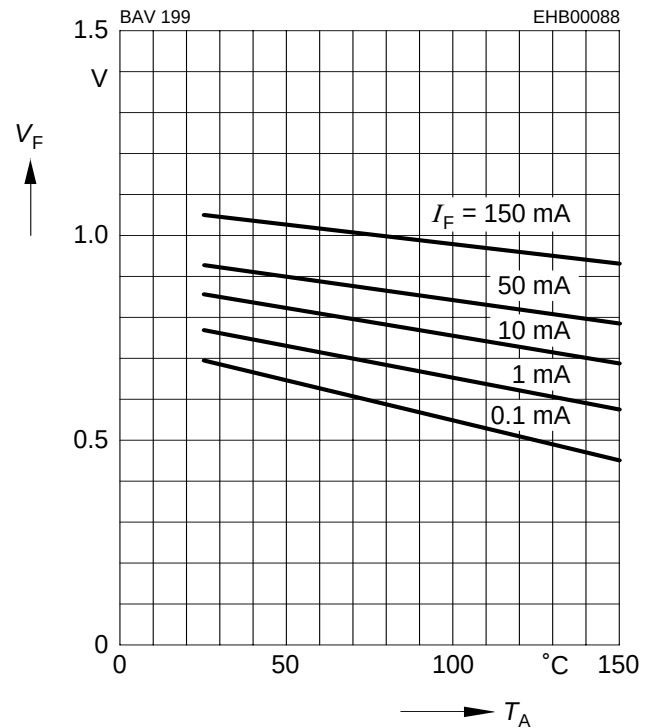
Reverse current $I_R = f(T_A)$

$V_R = 70V$



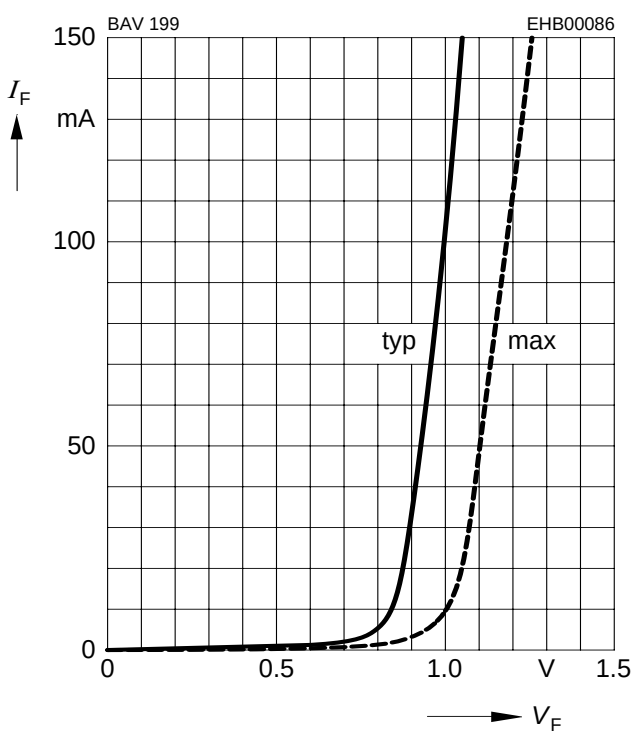
Forward Voltage $V_F = f(T_A)$

$I_F = \text{Parameter}$



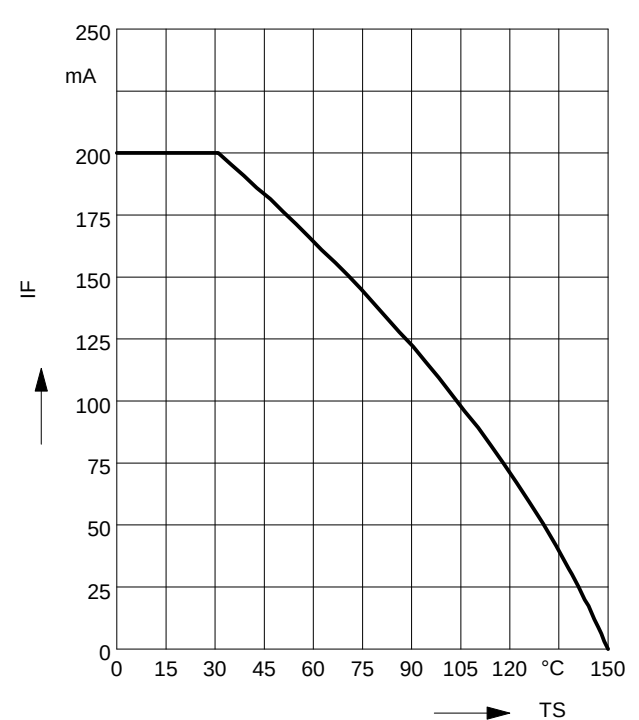
Forward current $I_F = f(V_F)$

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

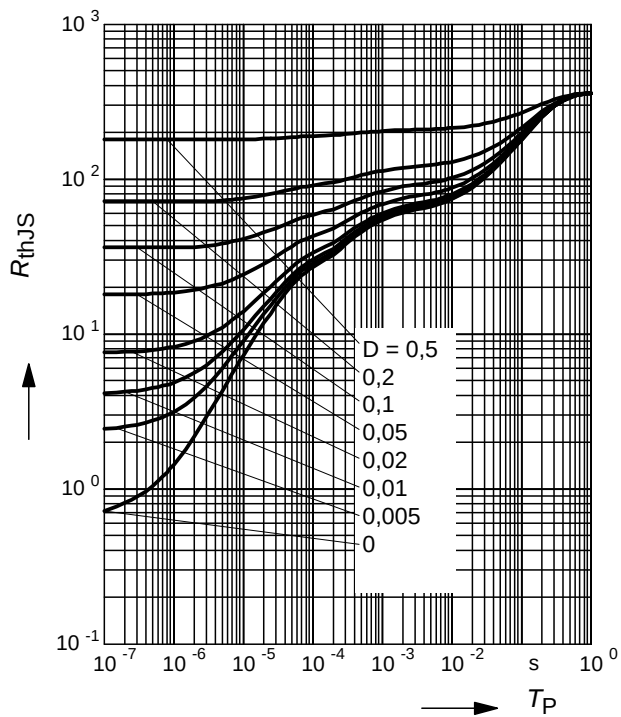


Forward current $I_F = f(T_S)$

BAV199

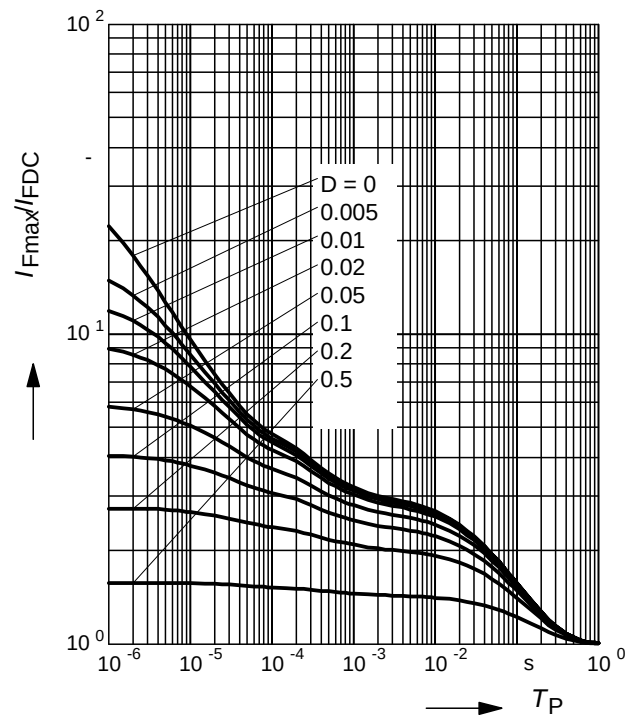


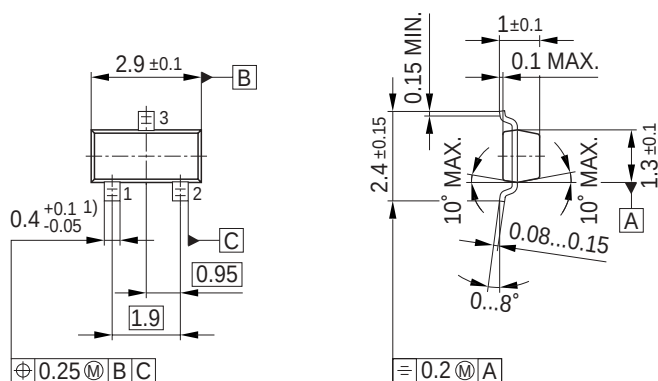
Permissible Puls Load $R_{thJS} = f(t_p)$



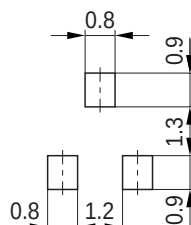
Permissible Pulse Load

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



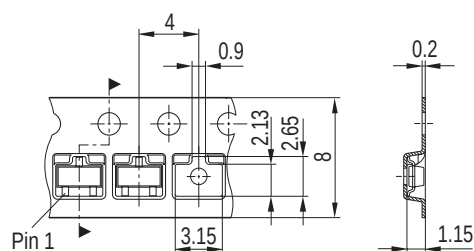


Foot Print



The diagram shows a top-down view of a BCW66 LED package. A rectangular label is centered on the package, containing the text "EHS" and "2005, June". The label is connected to four pins: Pin 1 (top left), Pin 2 (top right), Pin 3 (bottom left), and Pin 4 (bottom right). The pins are labeled with their respective numbers. The manufacturer "Infineon" is indicated by a logo and text to the right of the package. The date code "2005, June" is indicated by text to the right of the package. The type code "BCW66" is indicated by text to the right of the package.

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



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