

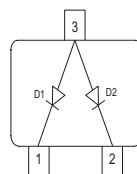
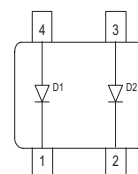
Silicon Schottky Diode

- For mixer applications in VHF/UHF range
- For high-speed switching application
- Pb-free (RoHS compliant) package


BAT17

**BAT17-04
BAT17-04W**

**BAT17-05
BAT17-05W**

BAT17-06W

BAT17-07


ESD (Electrostatic discharge) sensitive device, observe handling precaution!

Type	Package	Configuration	L_S (nH)	Marking
BAT17	SOT23	single	1.8	53s
BAT17-04	SOT23	series	1.8	54s
BAT17-04W	SOT323	series	1.4	54s
BAT17-05	SOT23	common cathode	1.8	55s
BAT17-05W	SOT323	common cathode	1.4	55s
BAT17-06W	SOT323	common anode	1.4	56s
BAT17-07	SOT143	parallel pair	2	57s

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

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	4	V
Forward current	I_F	130	mA
Total power dissipation	P_{tot}		mW
BAT17, $T_S \leq 77^\circ\text{C}$		150	
BAT17-04, $T_S \leq 61^\circ\text{C}$		150	
BAT17-05, $T_S \leq 46^\circ\text{C}$		150	
BAT17-04W, -05W, -6W, $T_S \leq 92^\circ\text{C}$		150	
BAT17-07, $T_S \leq 60^\circ\text{C}$		150	
Junction temperature	T_j	150	$^\circ\text{C}$
Operating temperature range	T_{op}	-55 ... 125	
Storage temperature	T_{stg}	-55 ... 150	

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point ¹⁾	R_{thJS}		K/W
BAT17		≤ 490	
BAT17-04, BAT17-07		≤ 590	
BAT17-05		≤ 690	
BAT17-04W, BAT17-05W, BAT17-06W		≤ 390	

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

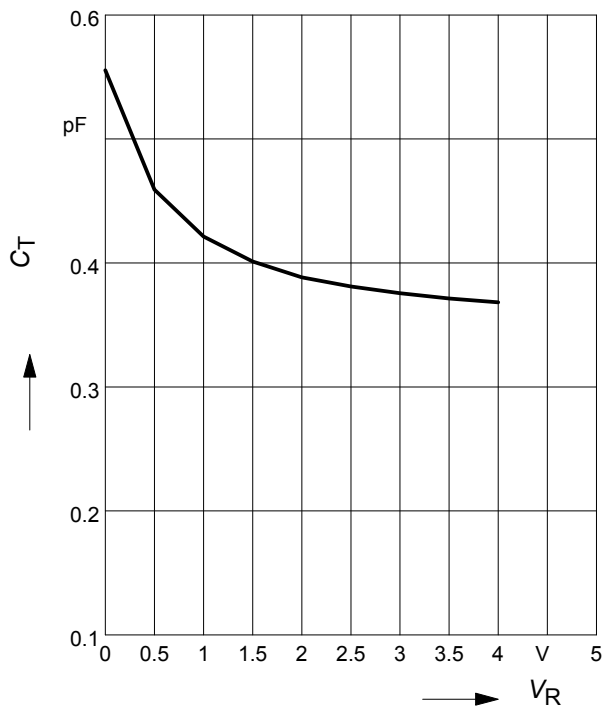
Electrical Characteristics at $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Breakdown voltage $I_{(BR)} = 10\text{ }\mu\text{A}$	$V_{(BR)}$	4	-	-	V
Reverse current $V_R = 3\text{ V}$ $V_R = 4\text{ V}$ $V_R = 3\text{ V}, T_A = 60\text{ }^{\circ}\text{C}$	I_R	- - -	- - -	0.25 10 1.25	μA
Forward voltage $I_F = 0.1\text{ mA}$ $I_F = 1\text{ mA}$ $I_F = 10\text{ mA}$	V_F	200 250 350	275 340 425	350 450 600	mV
Forward voltage matching ¹⁾ $I_F = 1\text{ mA}$	ΔV_F	-	-	20	
AC Characteristics					
Diode capacitance $V_R = 0, f = 1\text{ MHz}$	C_T	0.4	0.55	0.75	pF
Differential forward resistance $I_F = 5\text{ mA}, f = 10\text{ kHz}$	R_F	-	8	15	Ω

¹⁾ ΔV_F is the difference between lowest and highest V_F in multiple diode component.

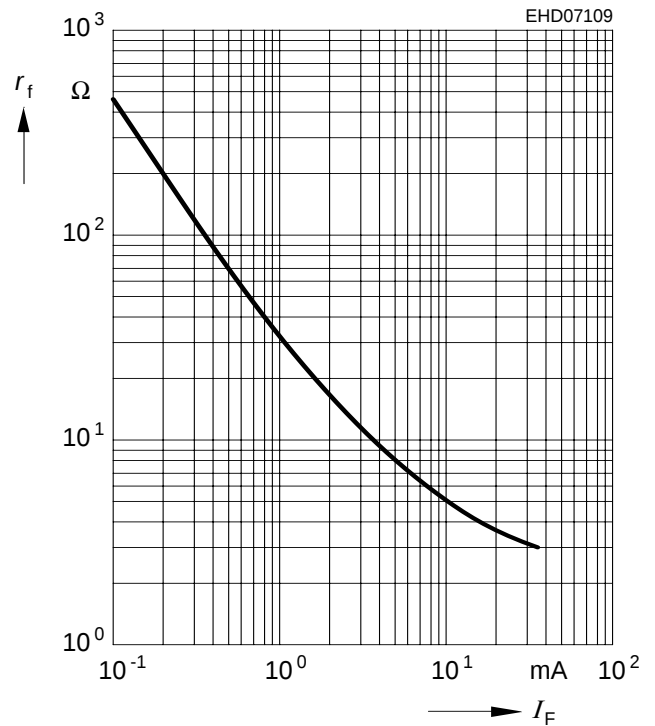
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



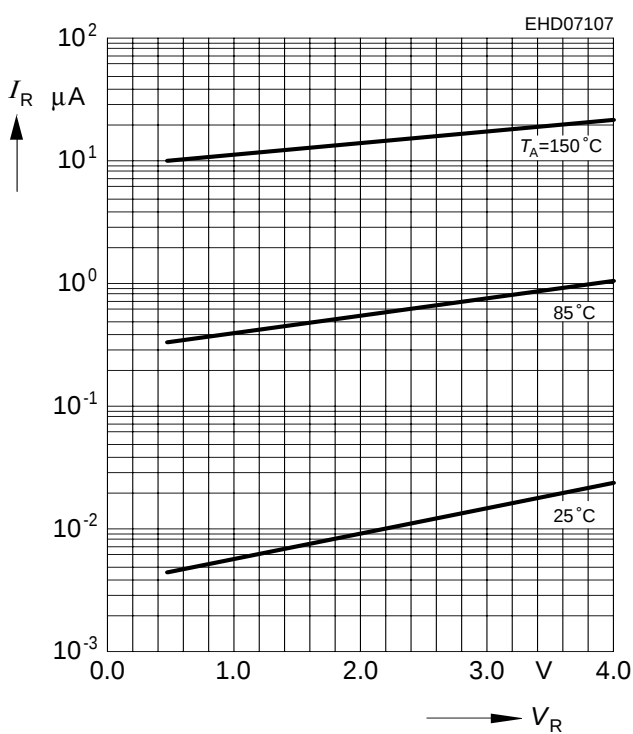
Forward resistance $r_f = f(I_F)$

$f = 10\text{kHz}$



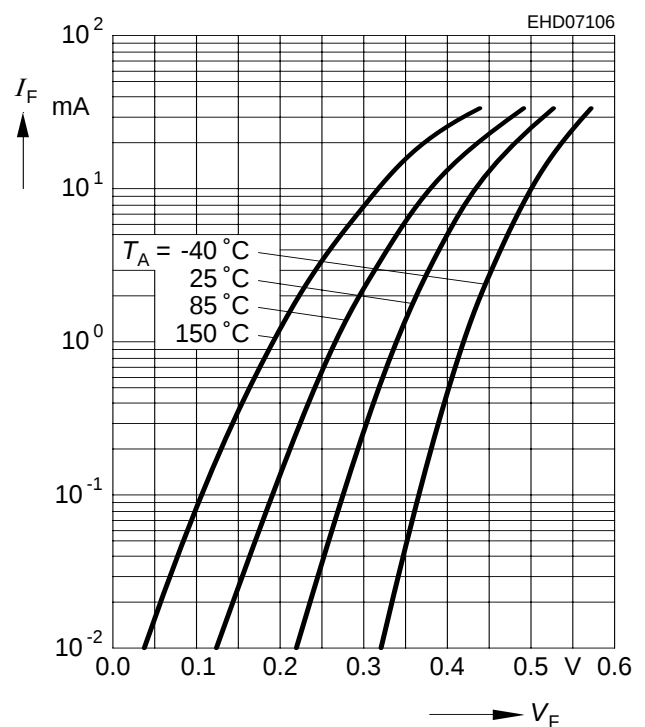
Reverse current $I_R = f(V_R)$

$T_A = \text{Parameter}$



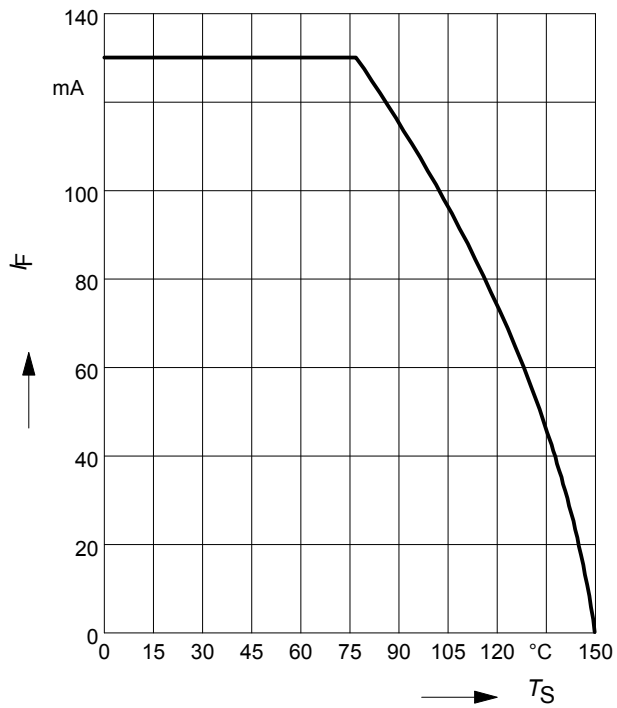
Forward current $I_F = f(V_F)$

$T_A = \text{Parameter}$



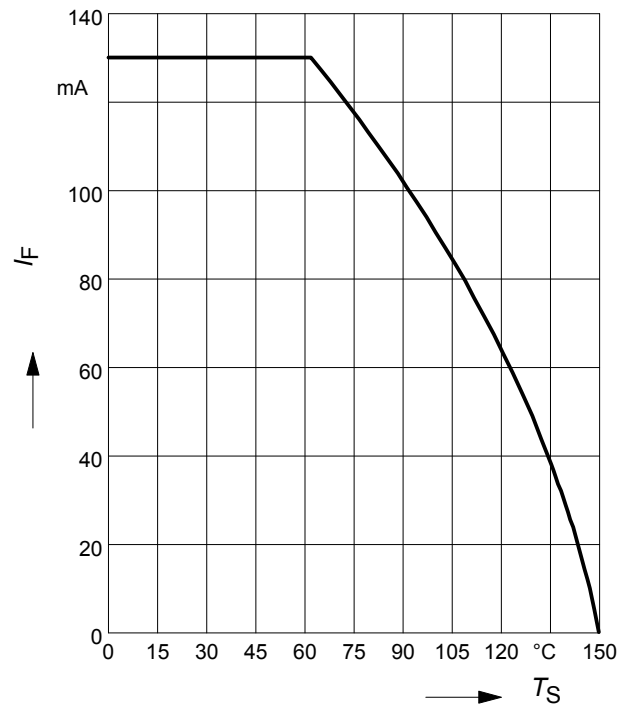
Forward current $I_F = f(T_S)$

BAT17



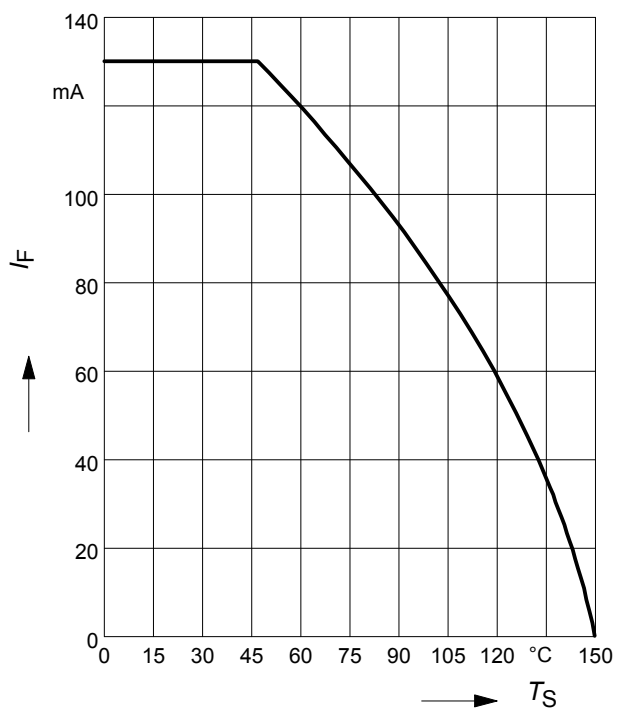
Forward current $I_F = f(T_S)$

BAT17-04, BAT17-07

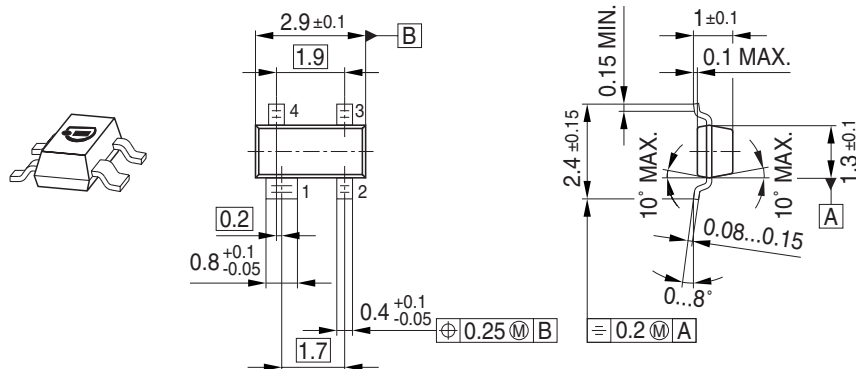


Forward current $I_F = f(T_S)$

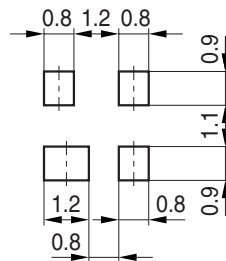
BAT17-05



Package Outline



Foot Print

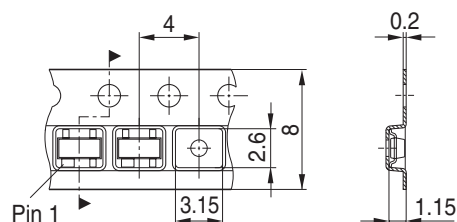


Marking Layout (Example)



Standard Packing

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

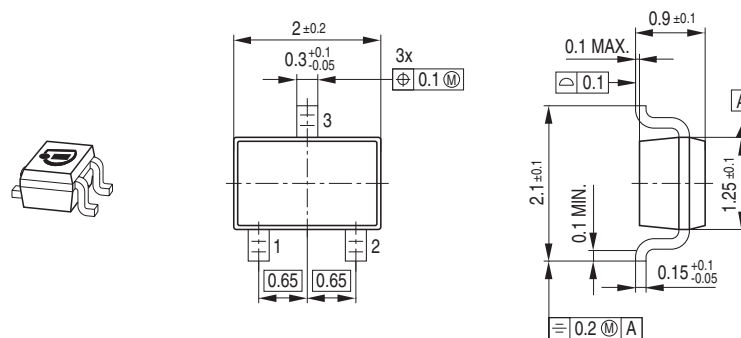




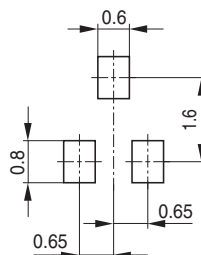
Technical drawing of a stepped shaft. The drawing shows a shaft with three steps. The dimensions are: 0.8 (width of the first step), 0.9 (height of the first step), 1.3 (height of the second step), 0.8 (width of the second step), 1.2 (width of the third step), and 0.9 (height of the third step).

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 containing the text 'EHS' and '2005, June' (Date code (YM)). The Infineon logo is visible in the top right corner. The text 'BCW66' and 'Type code' are located at the bottom right.

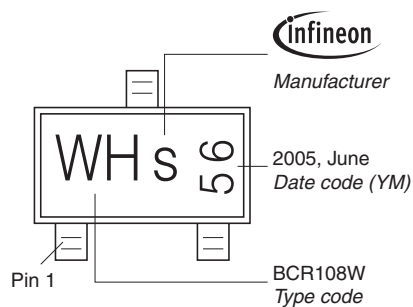
Package Outline



Foot Print

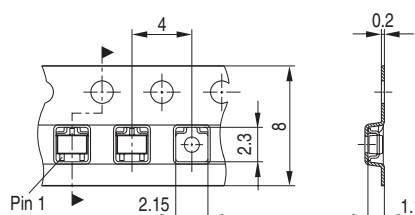


Marking Layout (Example)



Standard Packing

Reel $\varnothing 180$ mm = 3.000 Pieces/Reel
 Reel $\varnothing 330$ mm = 10.000 Pieces/Reel



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