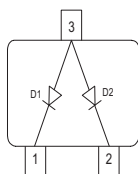
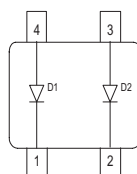
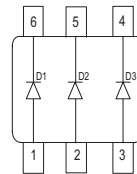


Silicon Schottky Diodes

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


BAT68

**BAT68-04
BAT68-04W**

**BAT68-06
BAT68-06W**

BAT68-07W

BAT68-08S


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

Type	Package	Configuration	L_S (nH)	Marking
BAT68	SOT23	single	1.8	83s
BAT68-04	SOT23	series	1.8	84s
BAT68-04W	SOT323	series	1.4	84s
BAT68-06	SOT23	common anode	1.8	86s
BAT68-06W	SOT323	common anode	1.4	86s
BAT68-07W	SOT343	parallel pair	1.6	87s
BAT68-08S	SOT363	parallel triple	1.4	83s

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

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	8	V
Forward current	I_F	130	mA
Total power dissipation BAT68, $T_S \leq 77^\circ\text{C}$ BAT68-04, BAT68-06, $T_S \leq 61^\circ\text{C}$ BAT68-04W/-06W/-08S, $T_S \leq 92^\circ\text{C}$ BAT68-07W, $T_S \leq 89^\circ\text{C}$	P_{tot}	150 150 150 150	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 ... 150	

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point ¹⁾ BAT68 BAT68-04, BAT68-06 BAT68-04W-BAT68-06W, BAT68-08S BAT68-07W	R_{thJS}	≤ 490 ≤ 590 ≤ 390 ≤ 410	K/W

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Breakdown voltage $I_{(\text{BR})} = 10 \mu\text{A}$	$V_{(\text{BR})}$	8	-	-	V
Reverse current $V_R = 1 \text{ V}$ $V_R = 1 \text{ V}, T_A = 60^\circ\text{C}$	I_R	- -	- -	0.1 1.2	μA
Forward voltage $I_F = 1 \text{ mA}$ $I_F = 10 \text{ mA}$	V_F	- 340	318 390	340 500	mV

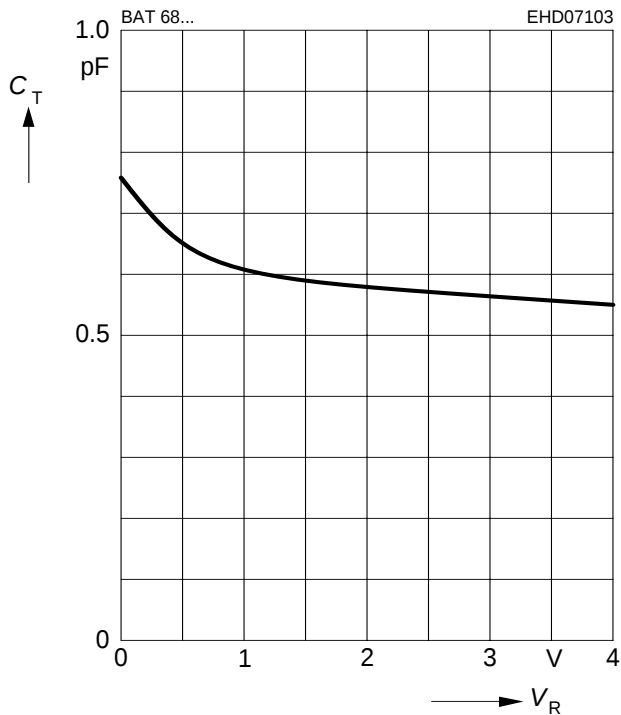
¹⁾For calculation of R_{thJA} please refer to Application Note Thermal Resistance

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
AC Characteristics					
Diode capacitance $V_R = 0$, $f = 1$ MHz	C_T	-	-	1	pF
Differential forward resistance $I_F = 5$ mA, $f = 10$ kHz	R_F	-	-	10	Ω

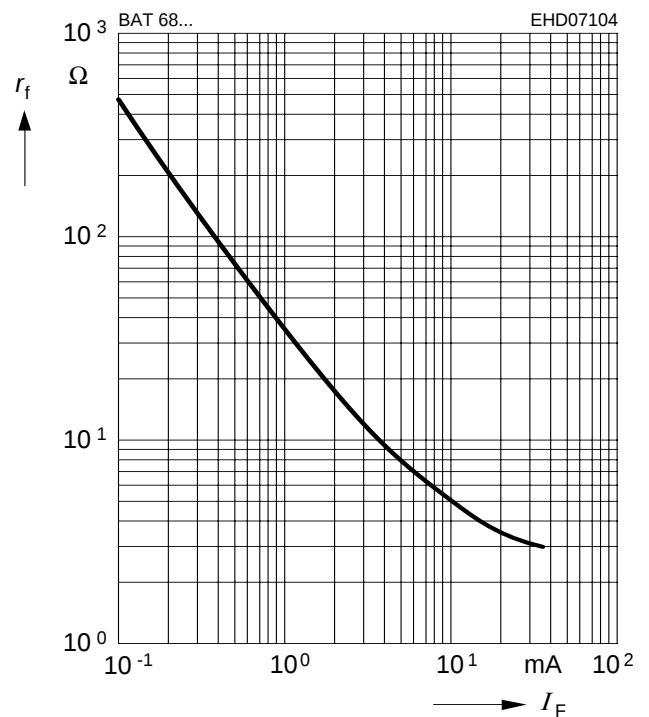
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



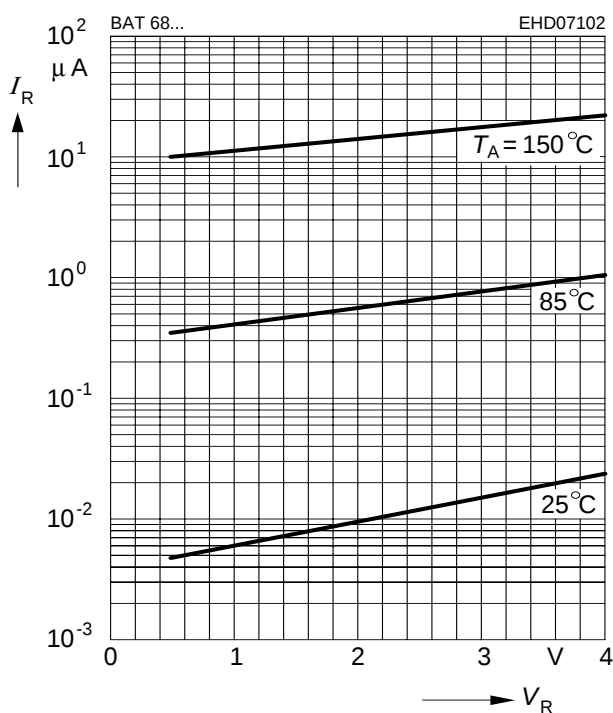
Differential forward resistance $r_f = f(I_F)$

$f = 10\text{kHz}$



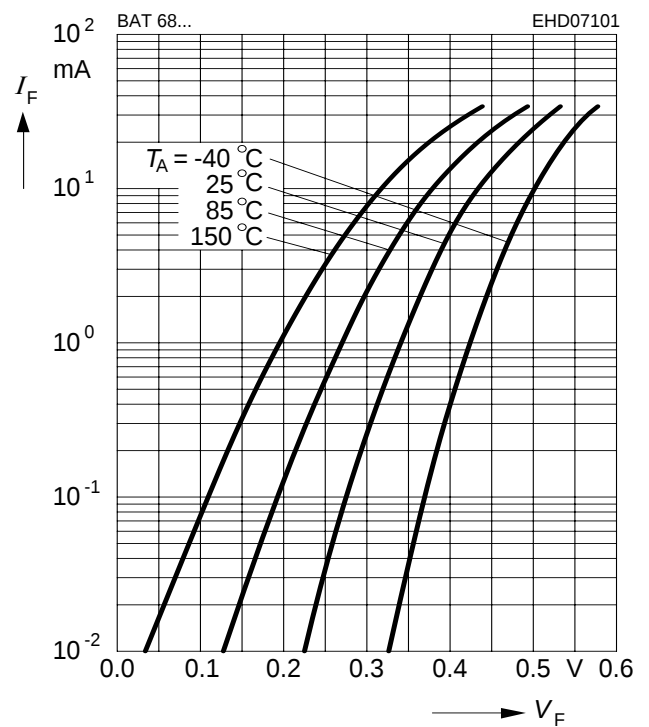
Reverse current $I_R = f(V_R)$

$T_A = \text{Parameter}$



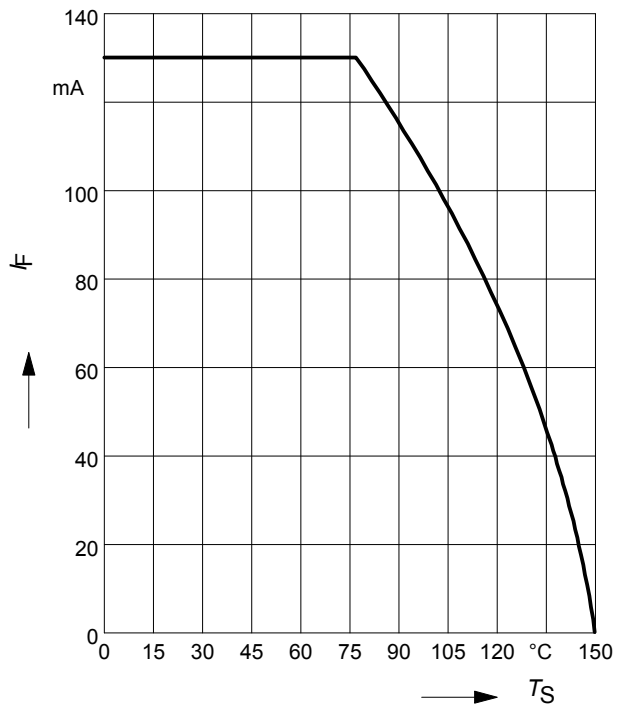
Forward current $I_F = f(V_F)$

$T_A = \text{Parameter}$



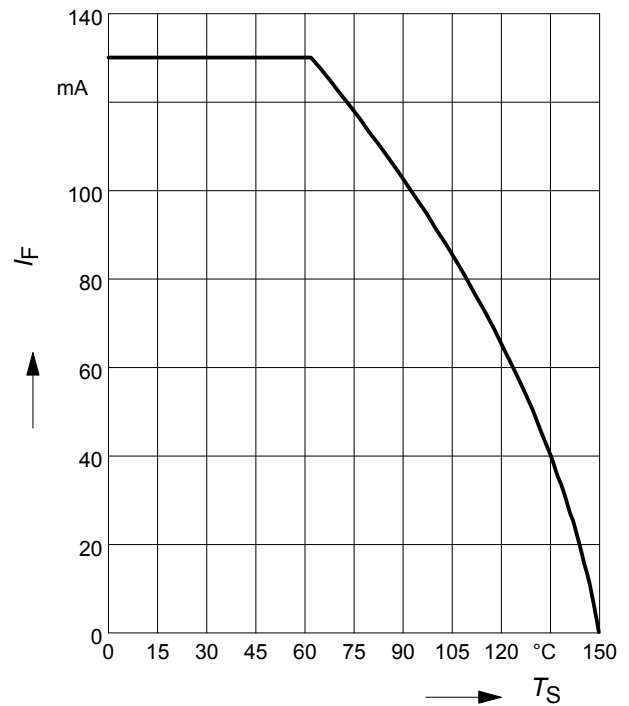
Forward current $I_F = f(T_S)$

BAT68



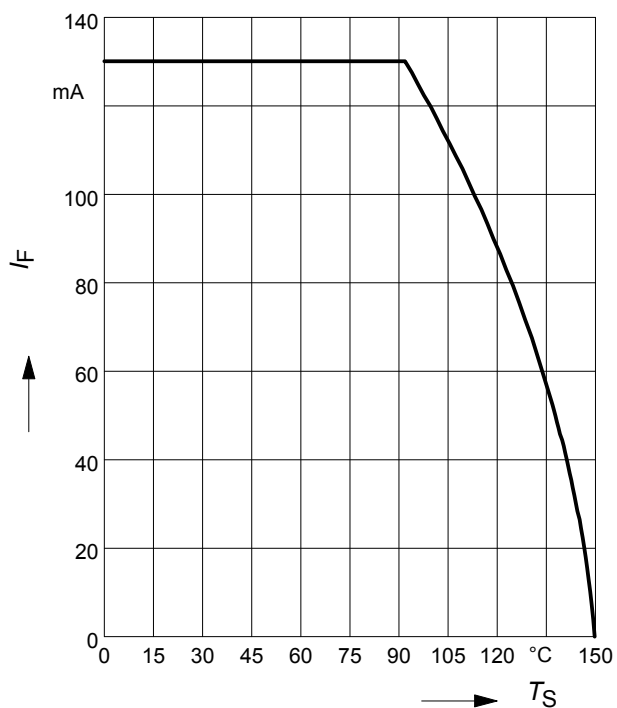
Forward current $I_F = f(T_S)$

BAT68-04, BAT68-06



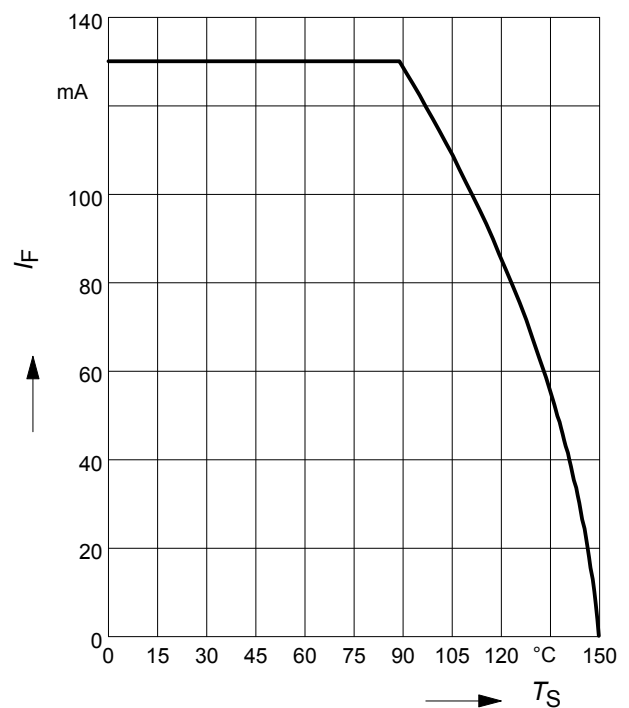
Forward current $I_F = f(T_S)$

BAT68-04W, BAT68-06W, BAT68-08S



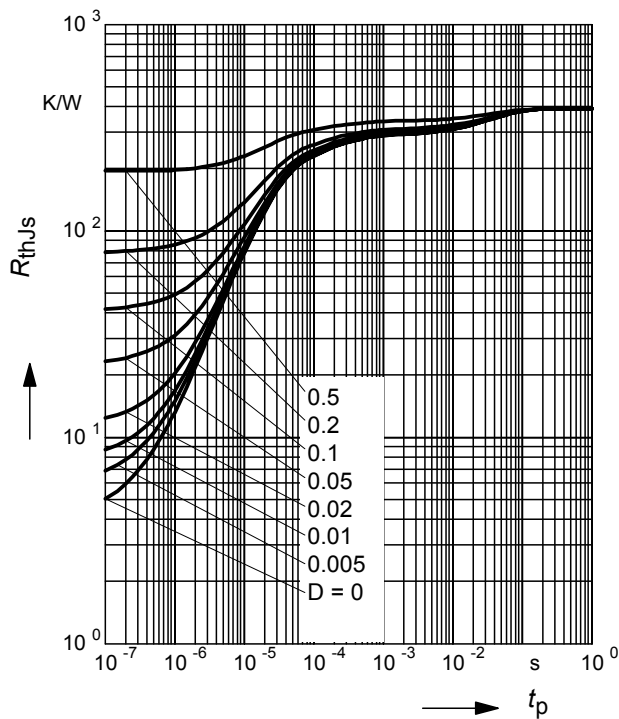
Forward current $I_F = f(T_S)$

BAT68-07W



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

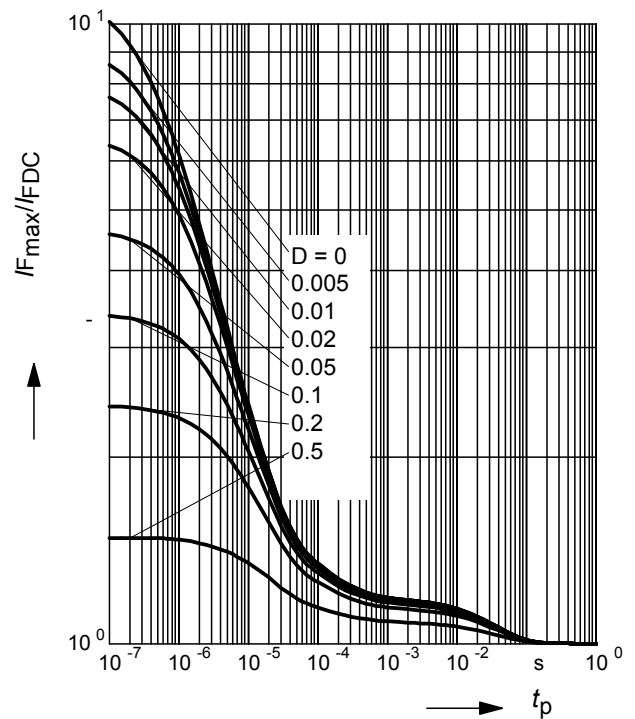
BAT68-04W, BAT68-06W



Permissible Pulse Load

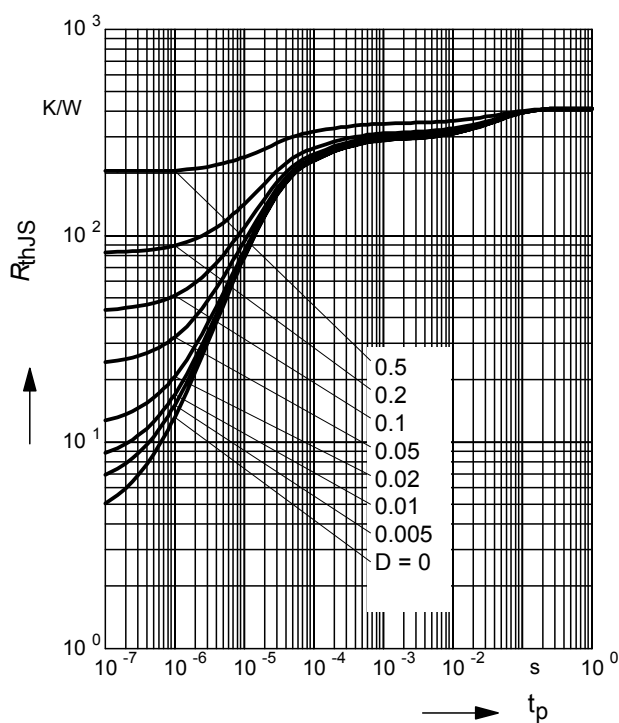
$$I_{Fmax}/I_{FDC} = f(t_p)$$

BAT68-04W, BAT68-06W



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

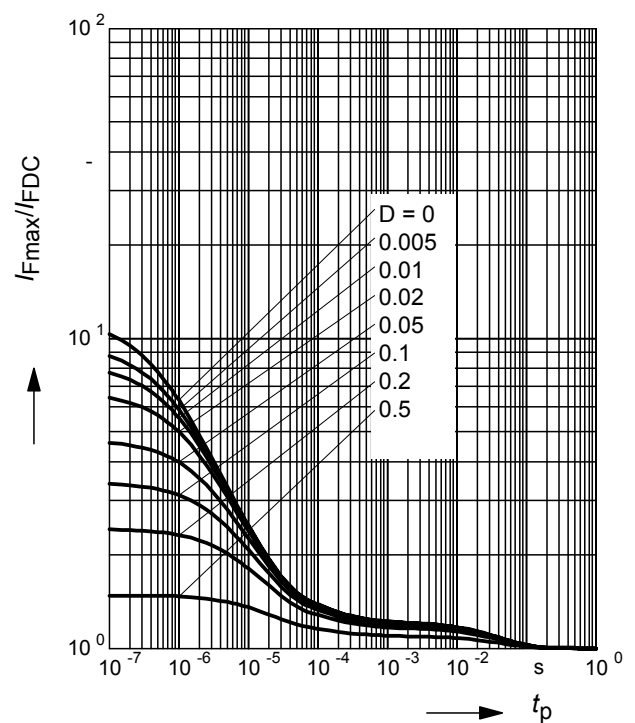
BAT68-07W



Permissible Pulse Load

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

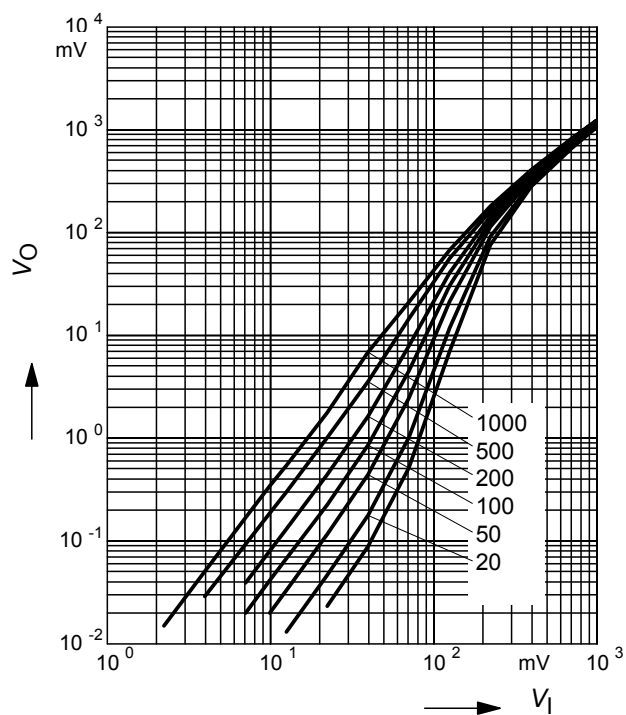
BAT68-07W



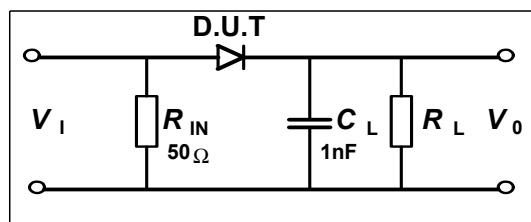
Rectifier voltage $V_{\text{out}} = f(V_{\text{in}})$

$f = 900\text{MHz}$

R_L = Parameter in $\text{k}\Omega$



Testcircuit

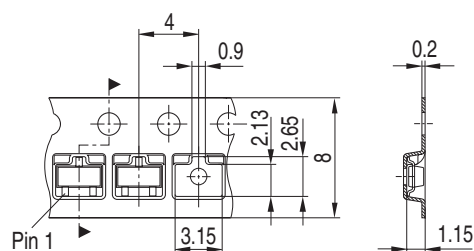




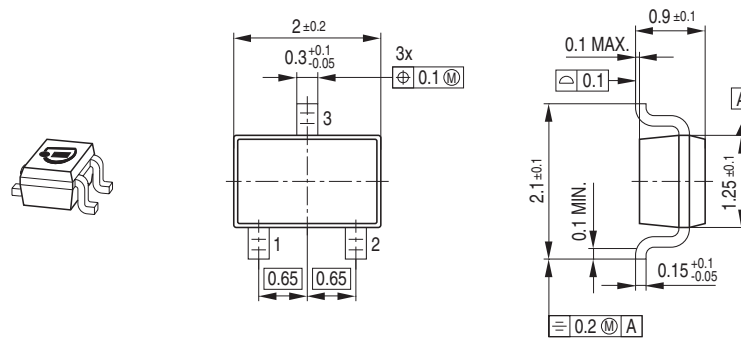
Technical drawing of a mechanical part with dimensions: 0.8, 0.9, 1.3, 0.8, 1.2, 0.9.

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 'EH S' and '05' (representing 2005, June) printed on it. The Infineon logo is visible in the top right corner. Labels with leader lines point to the Infineon logo (Manufacturer), the date code '05' (Date code (YM)), and the package type 'BCW66' (Type code).

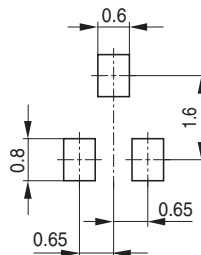
Reel ø180 mm = 3.000 Pieces/Reel
Reel ø330 mm = 10.000 Pieces/Reel



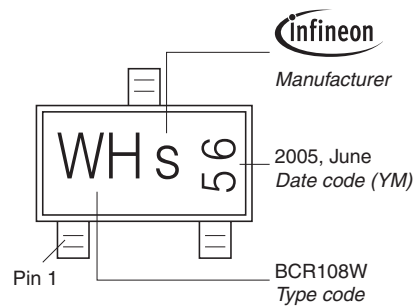
Package Outline



Foot Print

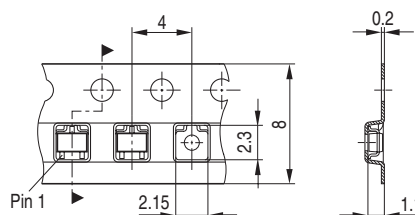


Marking Layout (Example)

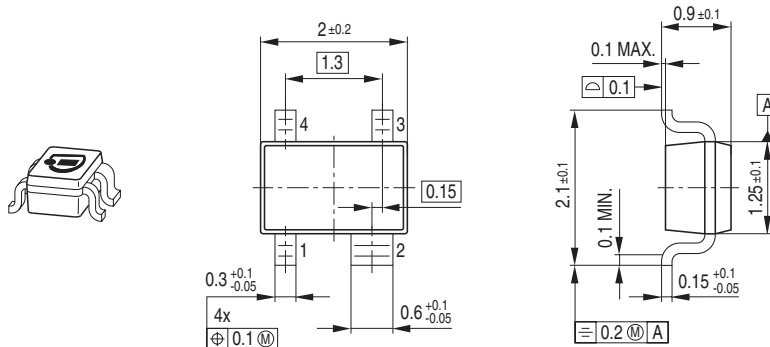


Standard Packing

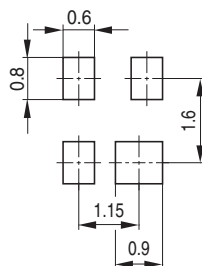
Reel $\varnothing 180 \text{ mm}$ = 3.000 Pieces/Reel
 Reel $\varnothing 330 \text{ mm}$ = 10.000 Pieces/Reel



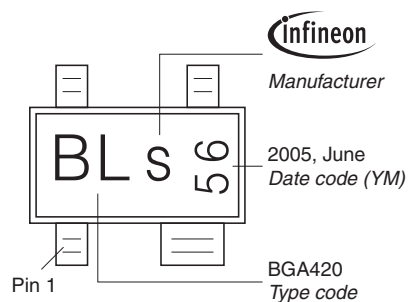
Package Outline



Foot Print

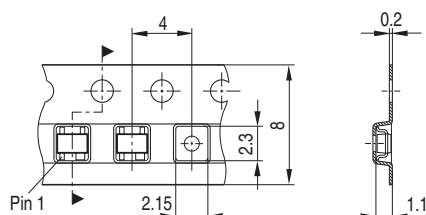


Marking Layout (Example)

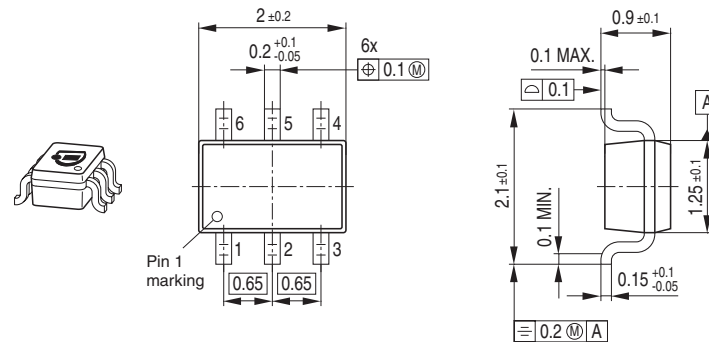


Standard Packing

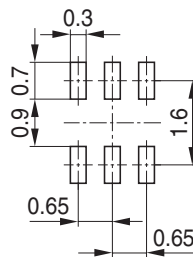
Reel ø180 mm = 3.000 Pieces/Reel
Reel ø330 mm = 10.000 Pieces/Reel



Package Outline

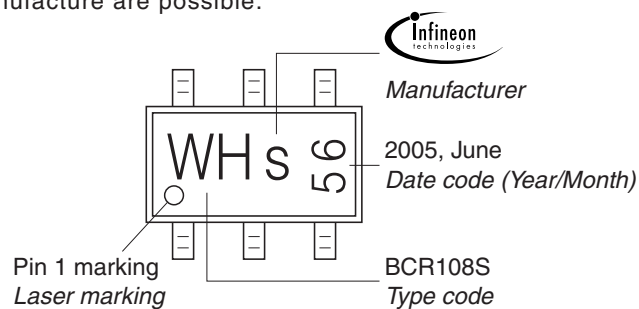


Foot Print



Marking Layout (Example)

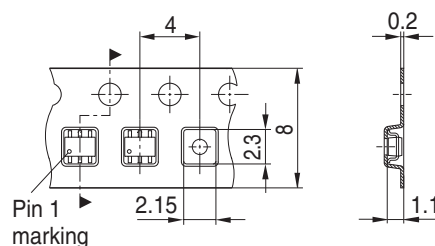
Small variations in positioning of Date code, Type code and Manufacture are possible.



Standard Packing

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

For symmetric types no defined Pin 1 orientation in reel.



Edition 2009-11-16

**Published by
Infineon Technologies AG
81726 Munich, Germany**

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