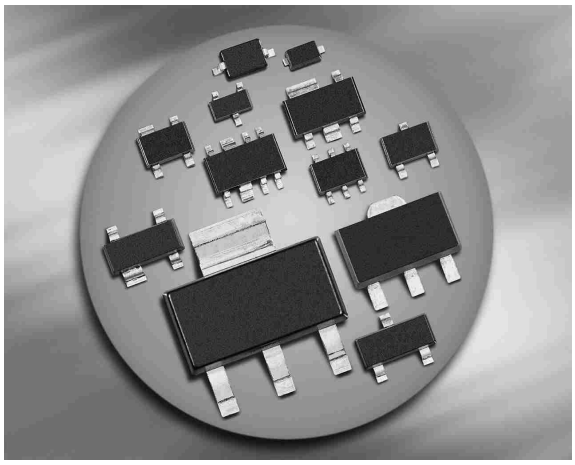
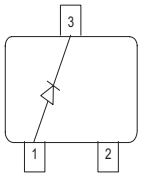
Silicon Schottky Diodes

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

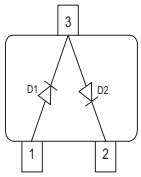
RoHS



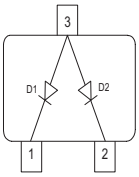
BAT68



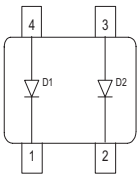
BAT68-04
BAT68-04W



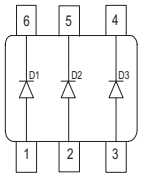
BAT68-06
BAT68-06W



BAT68-07W



BAT68-08S



ESD (**E**lectro**s**tatic **d**ischarge) 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°C, unless otherwise specified

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

Thermal Resistance

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

Electrical Characteristics at T_A = 25°C, unless otherwise specified

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

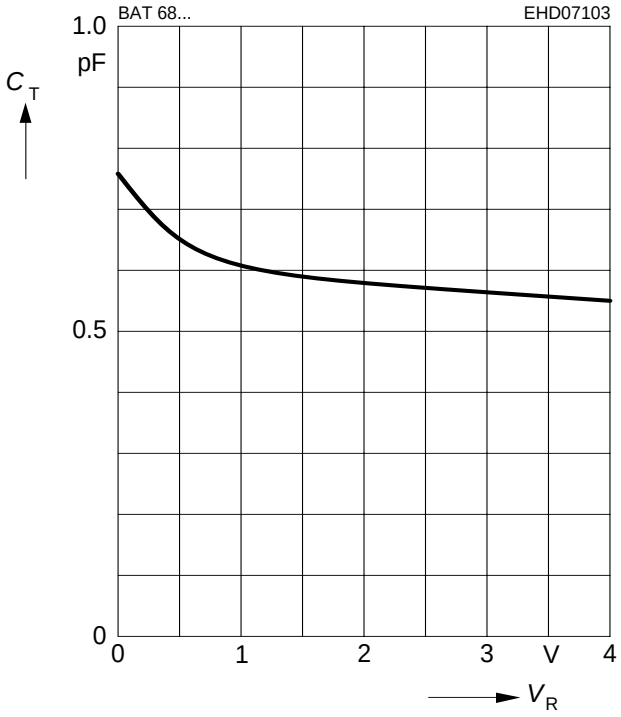
[1]For calculation of R_{thJA} please refer to Application Note Thermal Resistance

Electrical Characteristics at T_A = 25°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

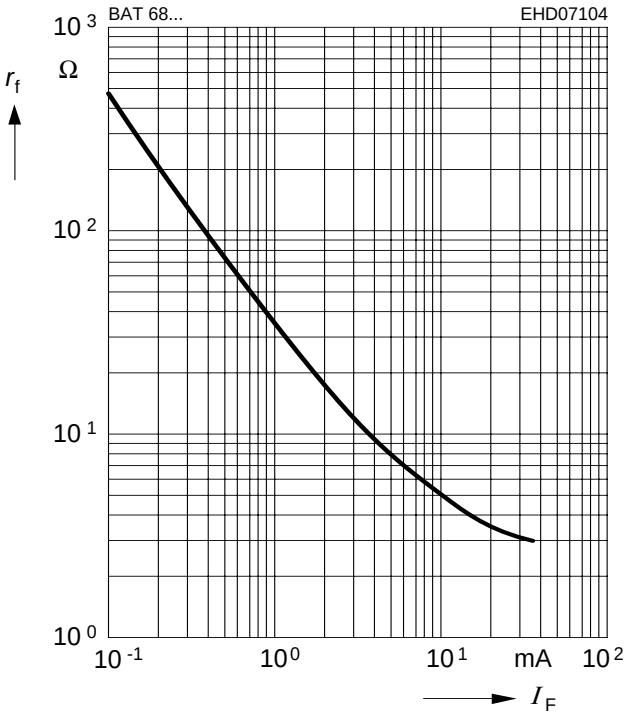
Diode capacitance $C_T = f(V_R)$

f = 1MHz



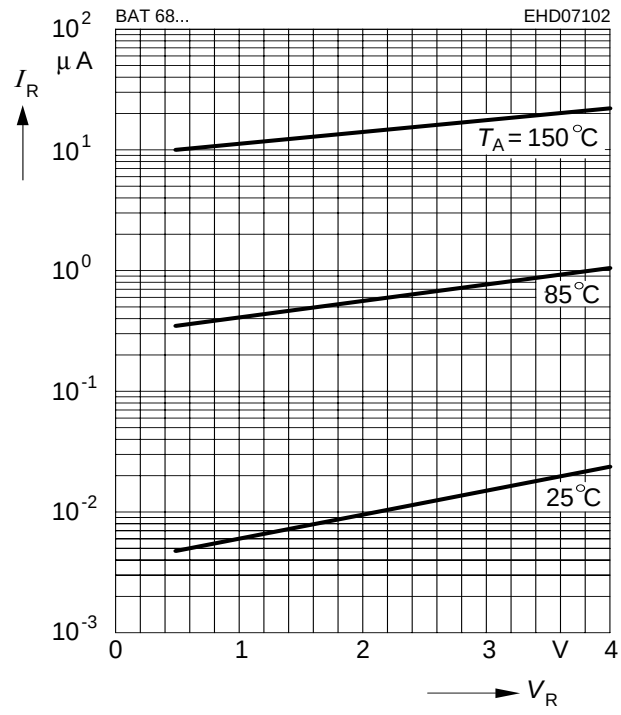
Differential forward resistance $r_f = f(I_F)$

f = 10kHz



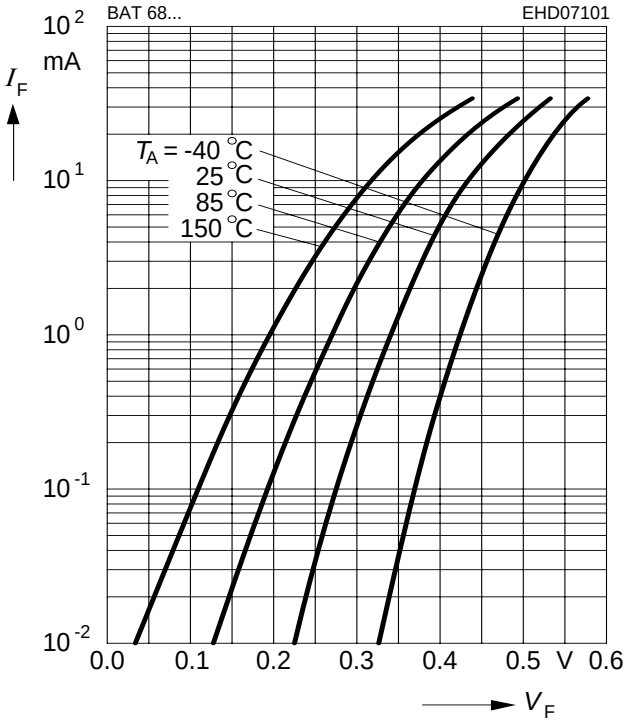
Reverse current $I_R = f(V_R)$

T_A = Parameter

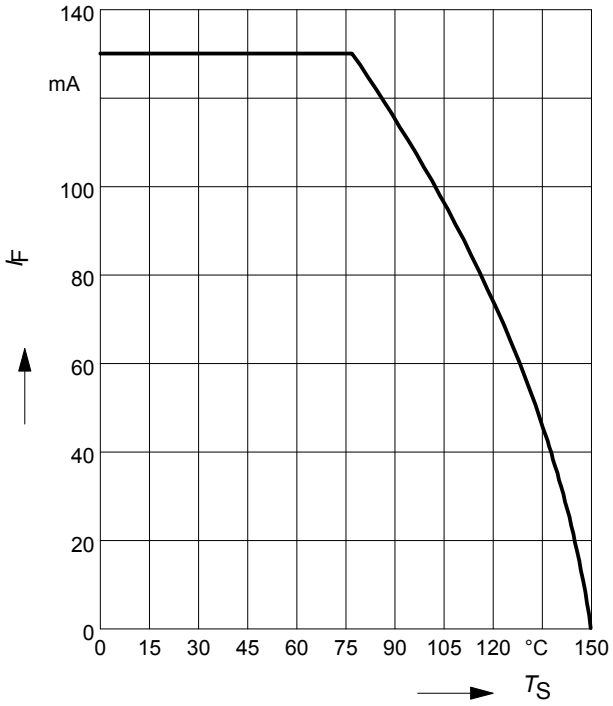


Forward current $I_F = f(V_F)$

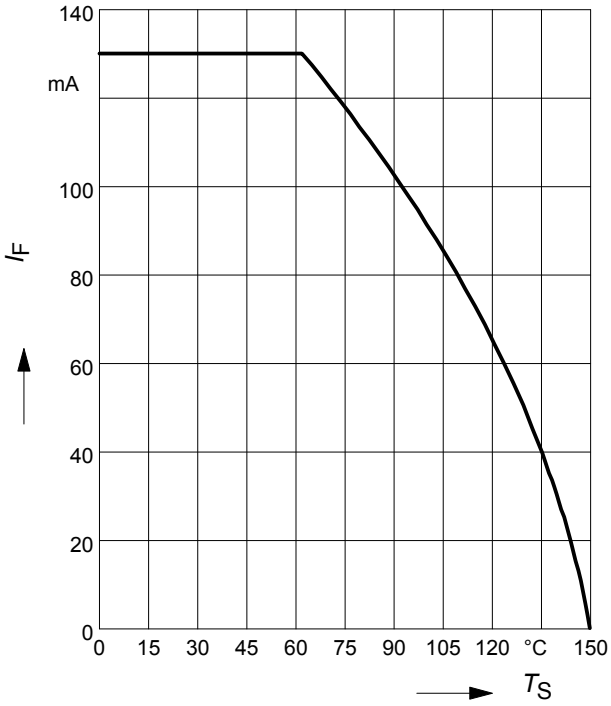
T_A = Parameter



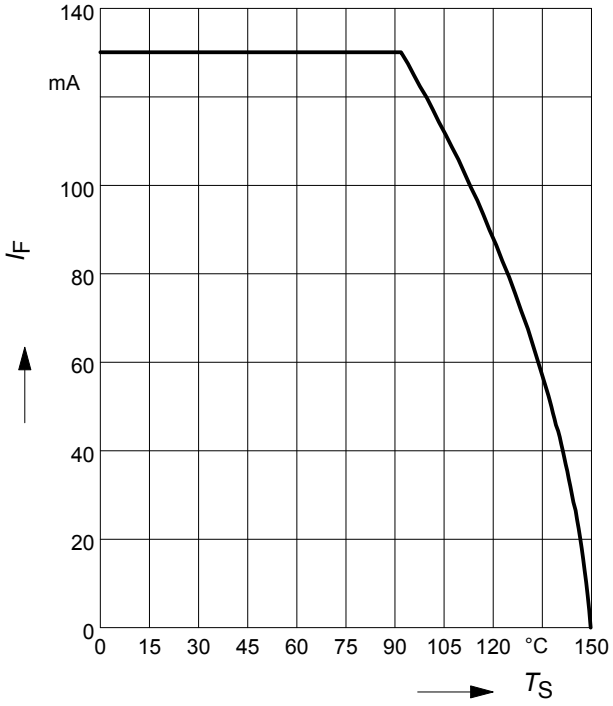
Forward current $I_F = f(T_S)$
BAT68



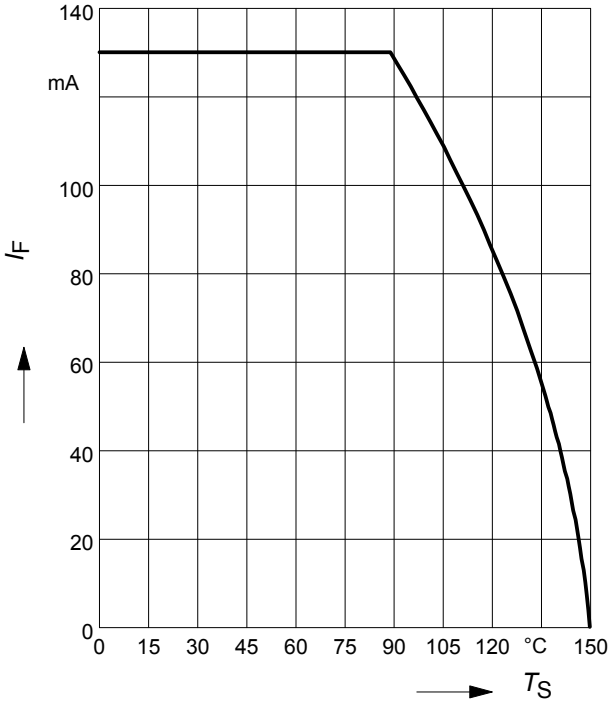
Forward current $I_F = f(T_S)$
BAT68-04, BAT68-06



Forward current $I_F = f(T_S)$
BAT68-04W, BAT68-06W, BAT68-08S

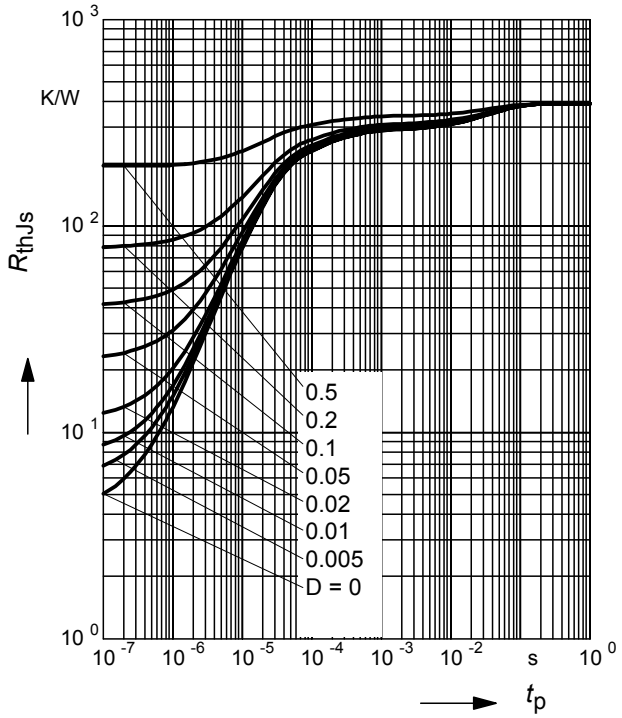


Forward current $I_F = f(T_S)$
BAT68-07W



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

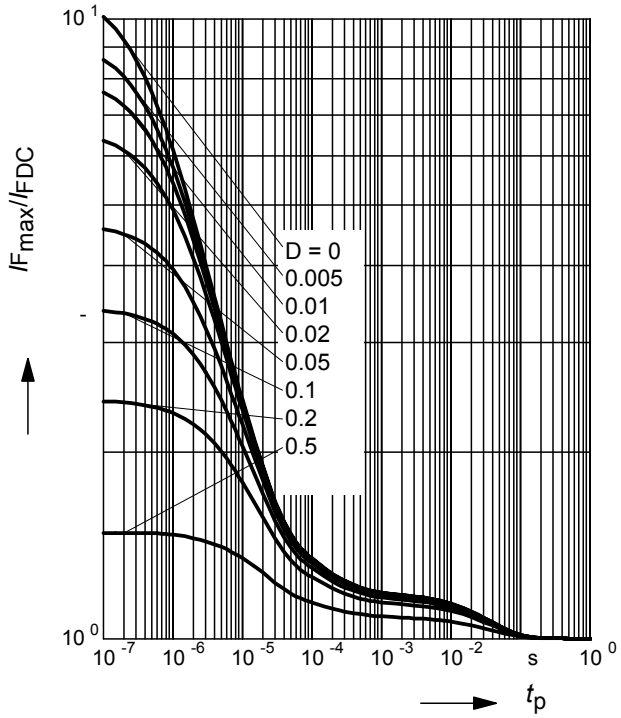
BAT68-04W, BAT68-06W



Permissible Pulse Load

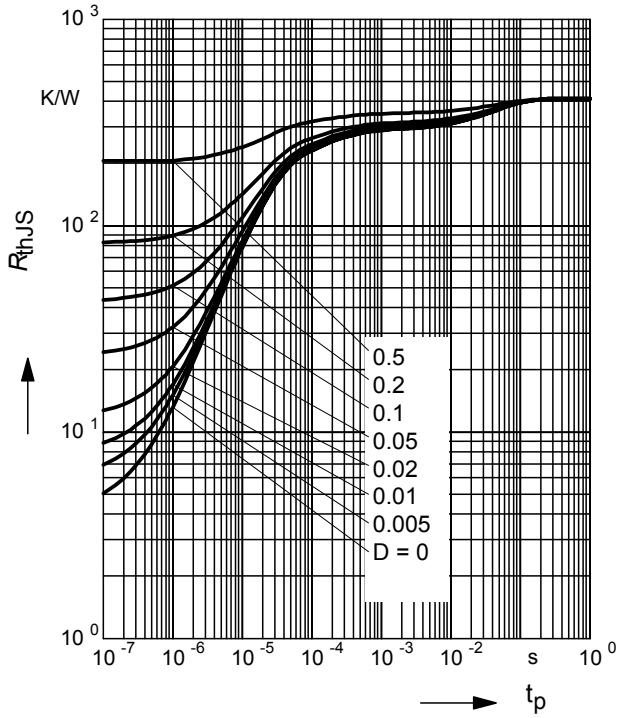
$I_{Fmax}/I_{FDC} = f(t_p)$

BAT68-04W, BAT68-06W



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

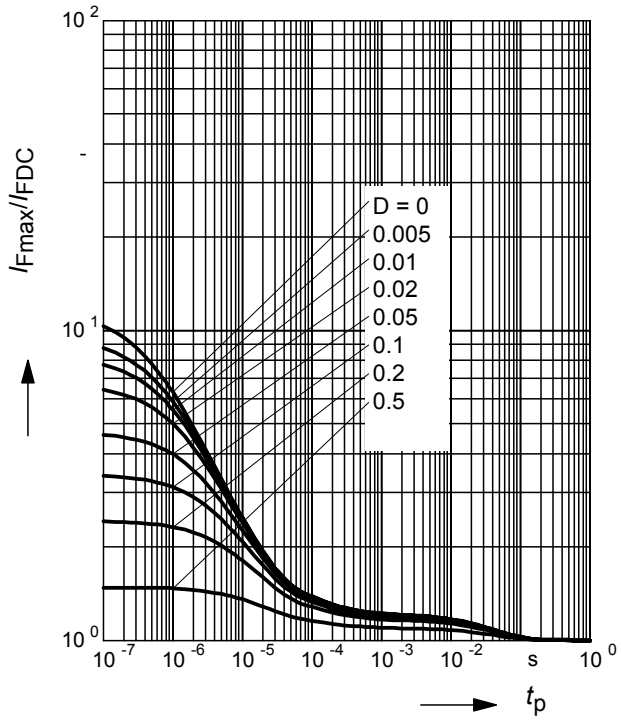
BAT68-07W



Permissible Pulse Load

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

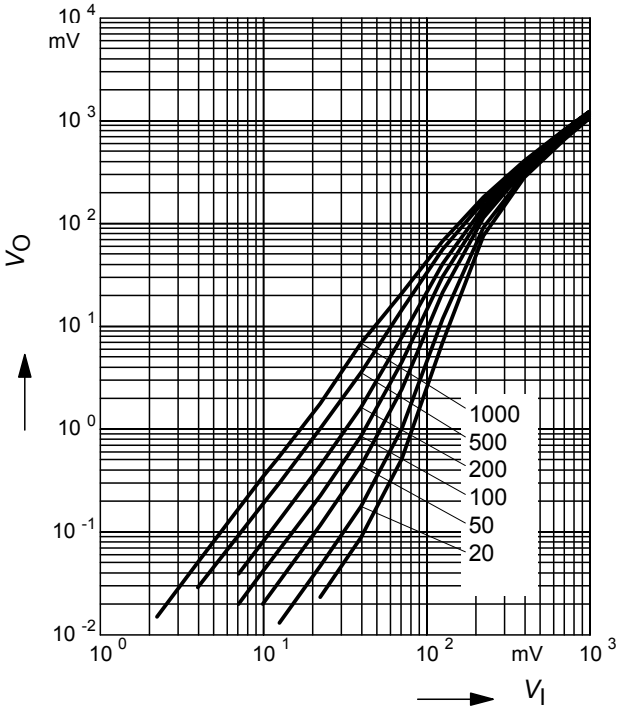
BAT68-07W



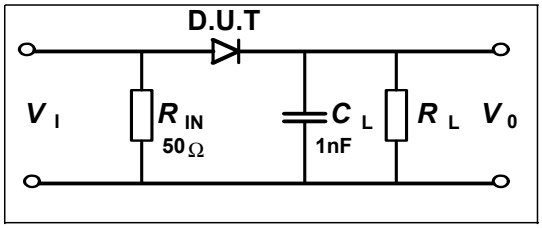
Rectifier voltage $V_{out} = f(V_{in})$

f = 900MHz

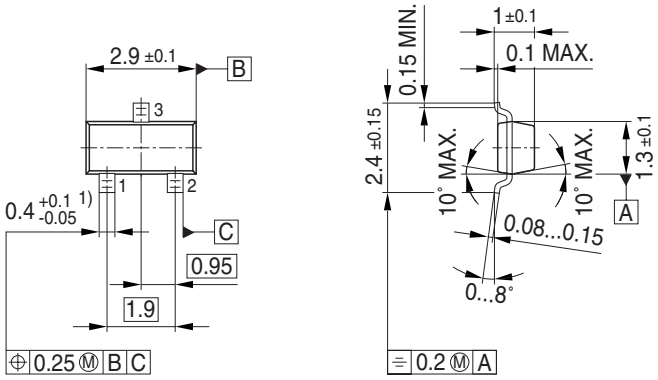
R_L = Parameter in kΩ



Testcircuit

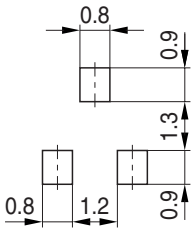


Package Outline

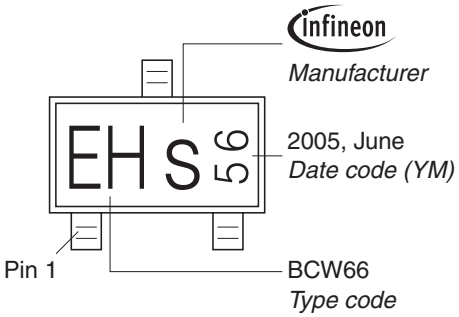


1) Lead width can be 0.6 max. in dambar area

Foot Print

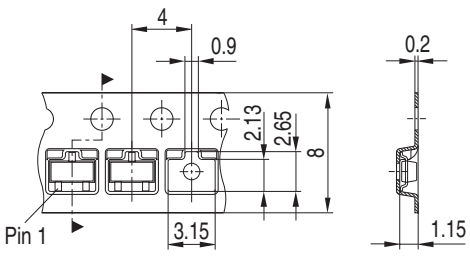


Marking Layout (Example)

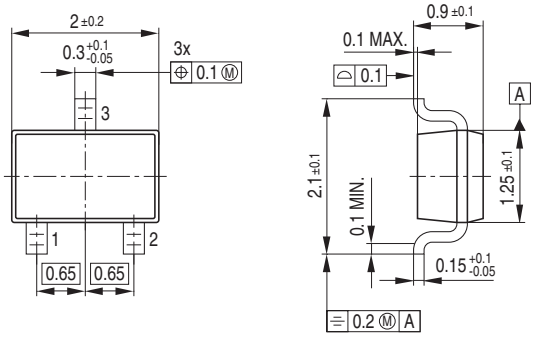


Standard Packing

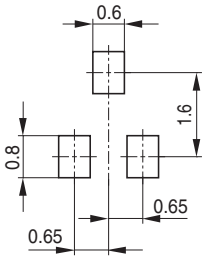
Reel ø180 mm = 3.000 Pieces/Reel
Reel ø330 mm = 10.000 Pieces/Reel



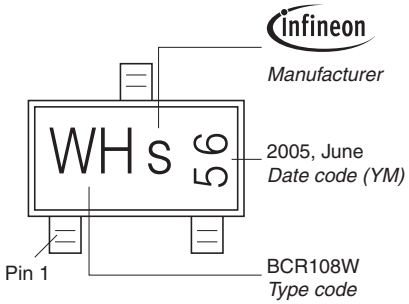
Package Outline



Foot Print

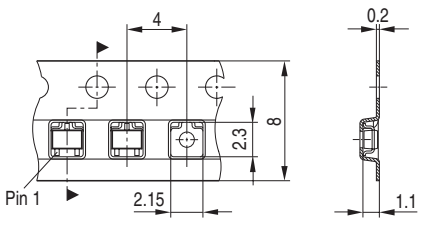


Marking Layout (Example)

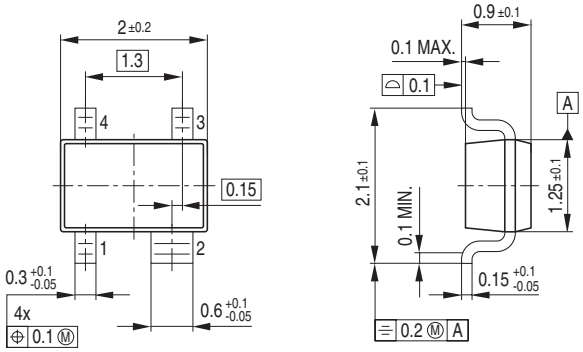


Standard Packing

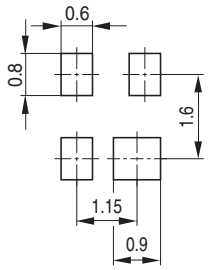
Reel ø180 mm = 3.000 Pieces/Reel
Reel ø330 mm = 10.000 Pieces/Reel



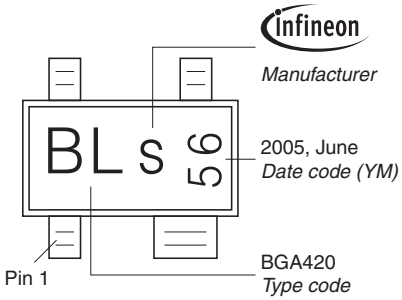
Package Outline



Foot Print

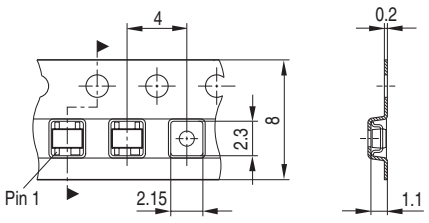


Marking Layout (Example)

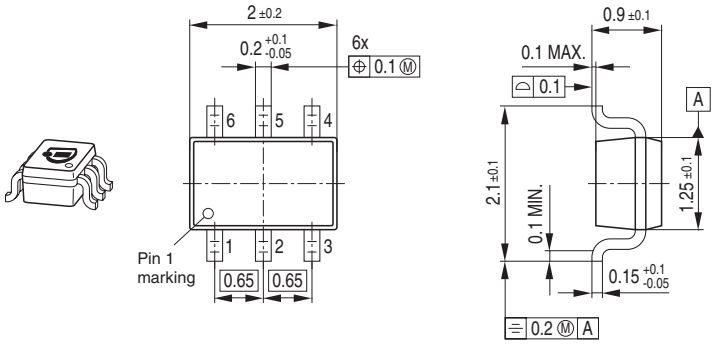


Standard Packing

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



Package Outline



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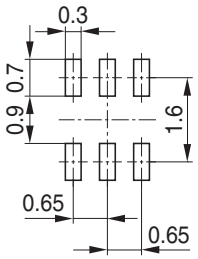
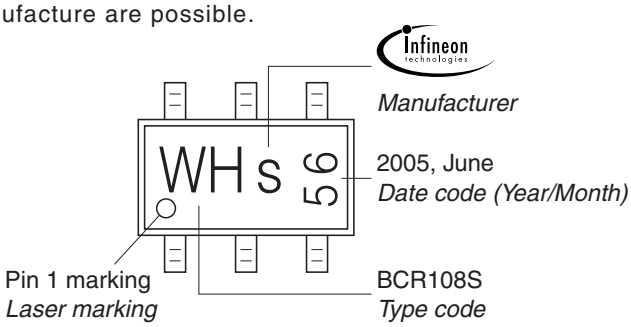


Marking Layout (Example)

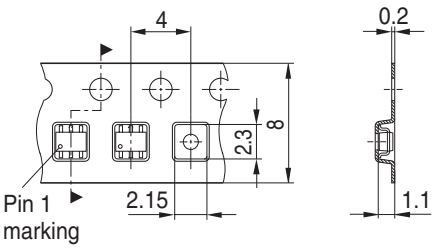
Small variations in positioning of
Date code, Type code and Manufacture are possible.



Standard Packing

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

For symmetric types no defined Pin 1 orientation in reel.



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