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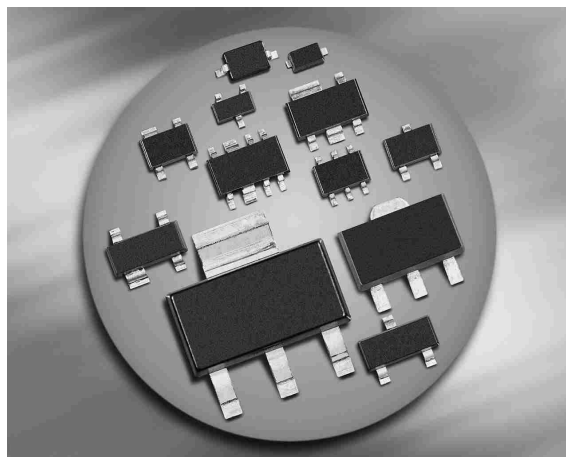
sales@integrated-circuit.com



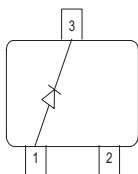
BAT68...

Silicon Schottky Diodes

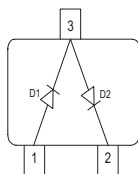
- For mixer applications in the VHF / UHF range
- For high-speed switching applications
- Pb-free (RoHS compliant) package



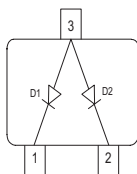
BAT68



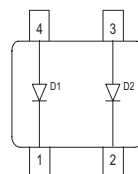
**BAT68-04
BAT68-04W**



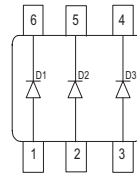
**BAT68-06
BAT68-06W**



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



BAT68...

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	P_{tot}		mW
BAT68, $T_S \leq 77^\circ\text{C}$		150	
BAT68-04, BAT68-06, $T_S \leq 61^\circ\text{C}$		150	
BAT68-04W/-06W/-08S, $T_S \leq 92^\circ\text{C}$		150	
BAT68-07W, $T_S \leq 89^\circ\text{C}$		150	
Junction temperature	T_j	150	$^\circ\text{C}$
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 $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

DC Characteristics

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



BAT68...

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

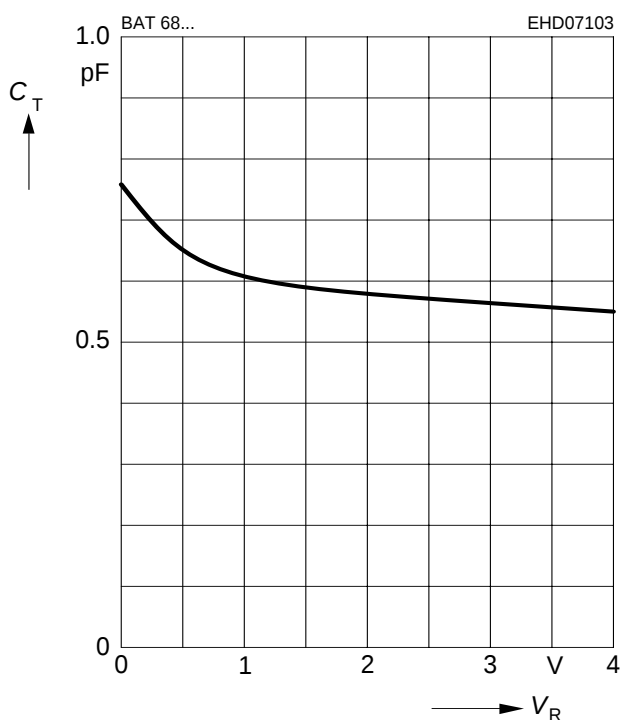
Parameter	Symbol	Values			Unit
		min.	typ.	max.	
AC Characteristics					
Diode capacitance $V_R = 0$, $f = 1$ MHz	C_T	-	-	1	pF
Differential forward resistance $I_F = 5$ mA, $f = 10$ kHz	R_F	-	-	10	Ω



BAT68...

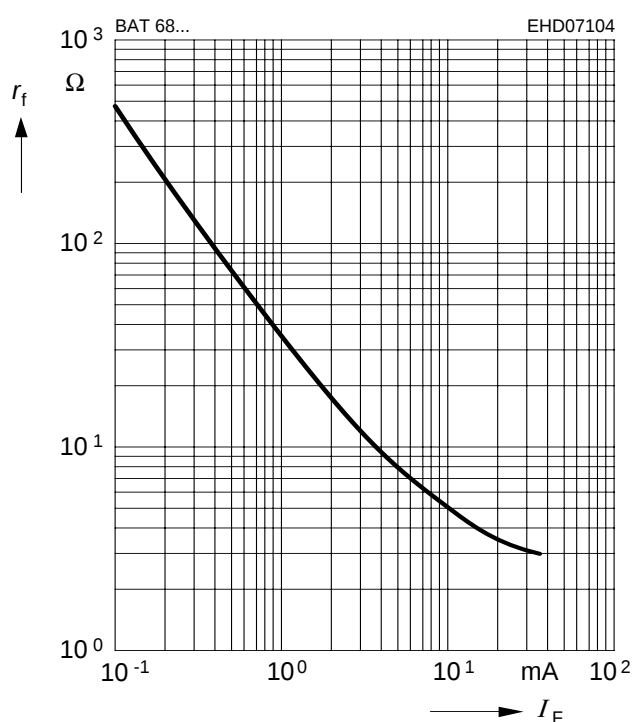
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



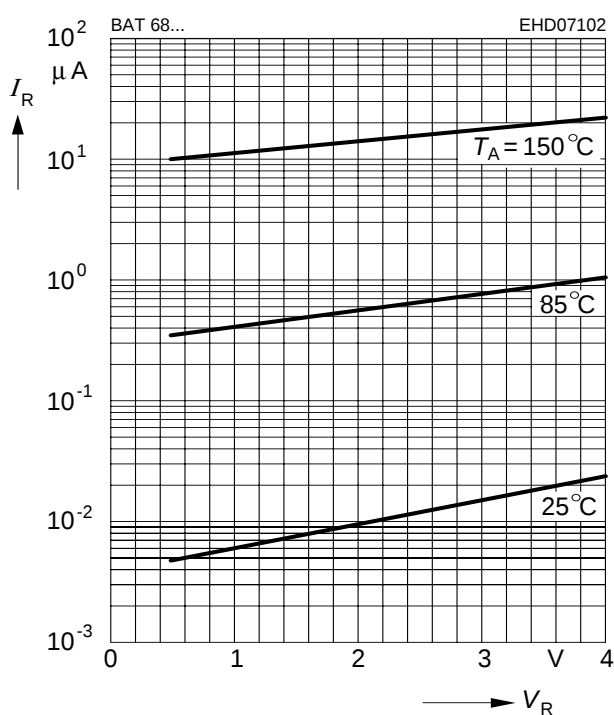
Differential forward resistance $r_f = f(I_F)$

$f = 10\text{kHz}$



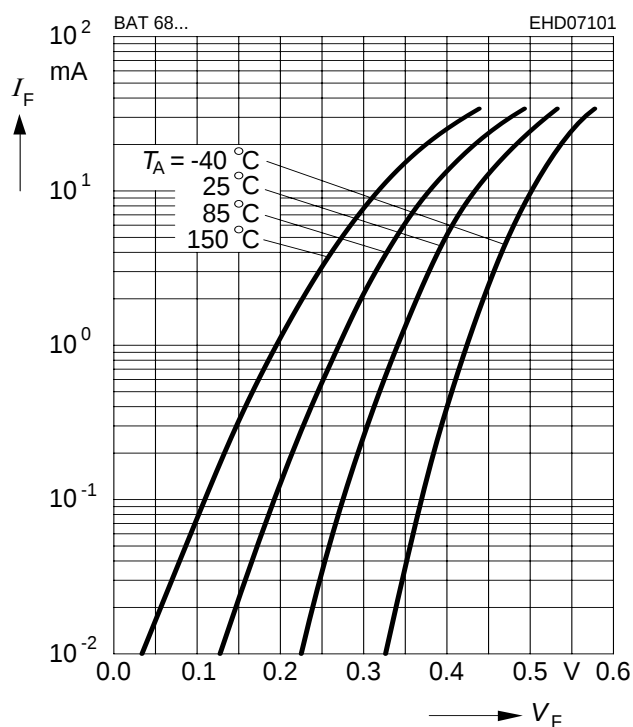
Reverse current $I_R = f(V_R)$

$T_A = \text{Parameter}$



Forward current $I_F = f(V_F)$

$T_A = \text{Parameter}$

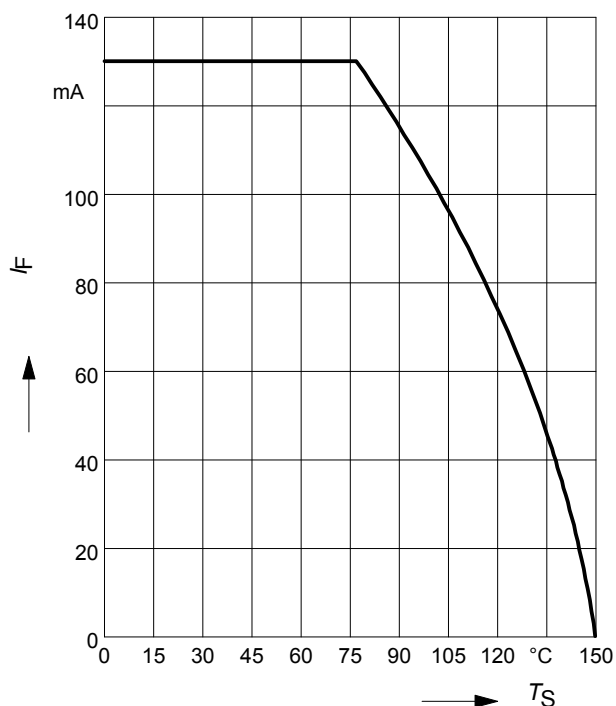




BAT68...

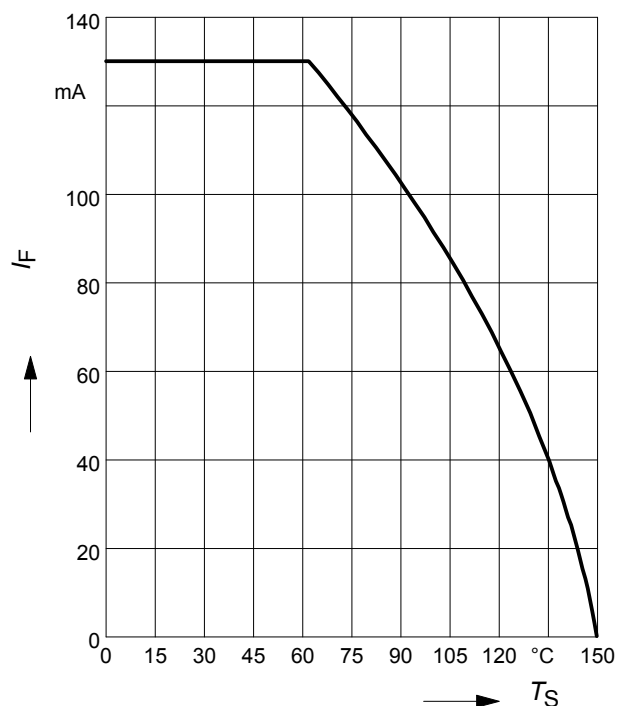
Forward current $I_F = f(T_S)$

BAT68



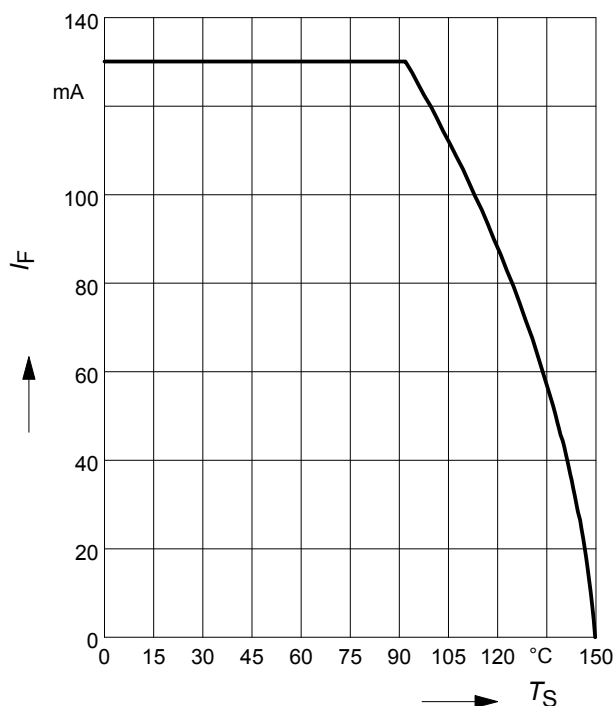
Forward current $I_F = f(T_S)$

BAT68-04, BAT68-06



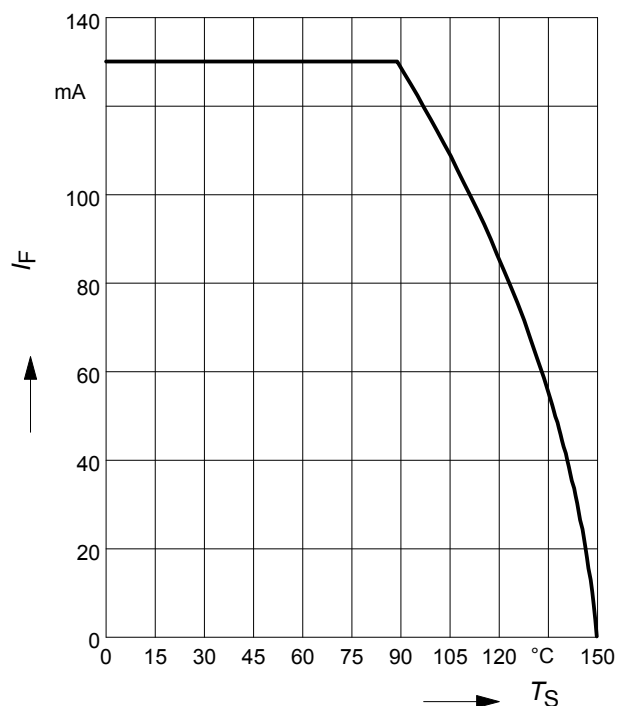
Forward current $I_F = f(T_S)$

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



Forward current $I_F = f(T_S)$

BAT68-07W

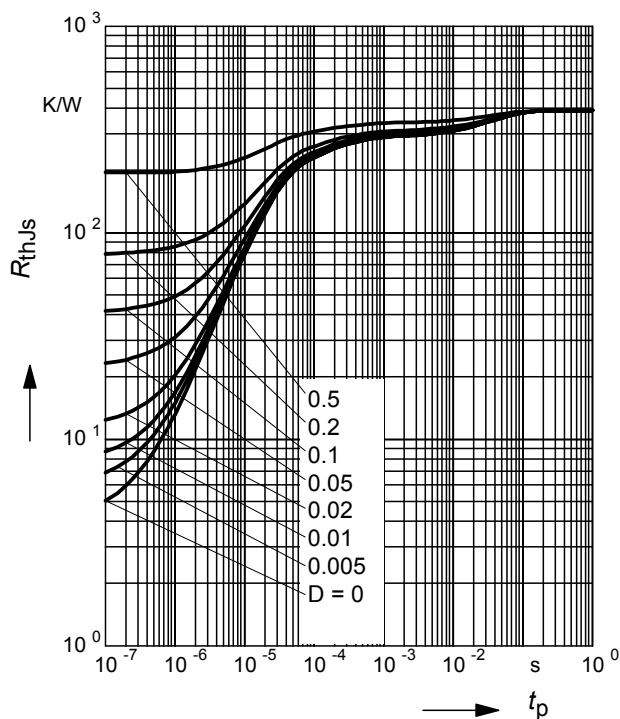




BAT68...

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

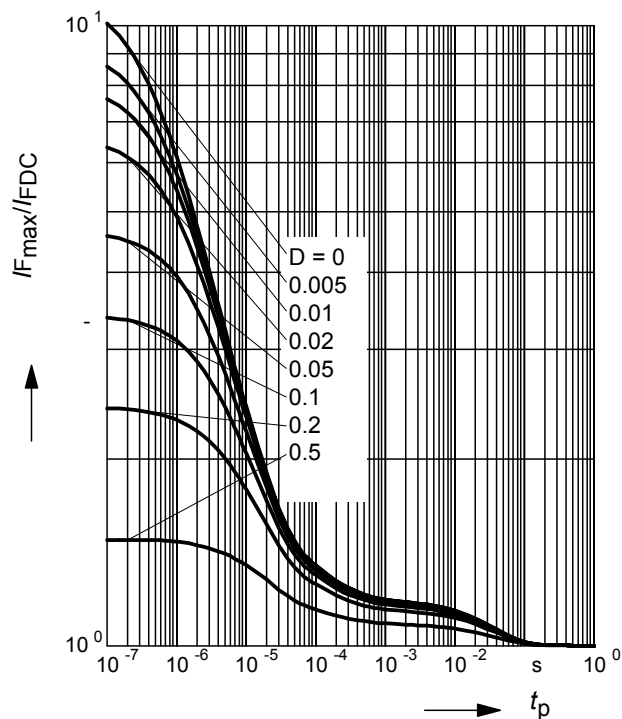
BAT68-04W, BAT68-06W



Permissible Pulse Load

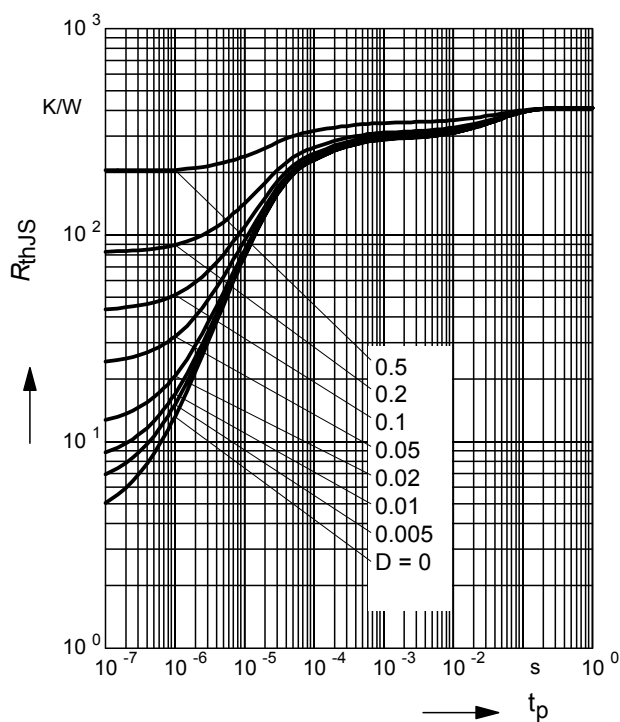
$$I_{Fmax}/I_{FDC} = f(t_p)$$

BAT68-04W, BAT68-06W



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

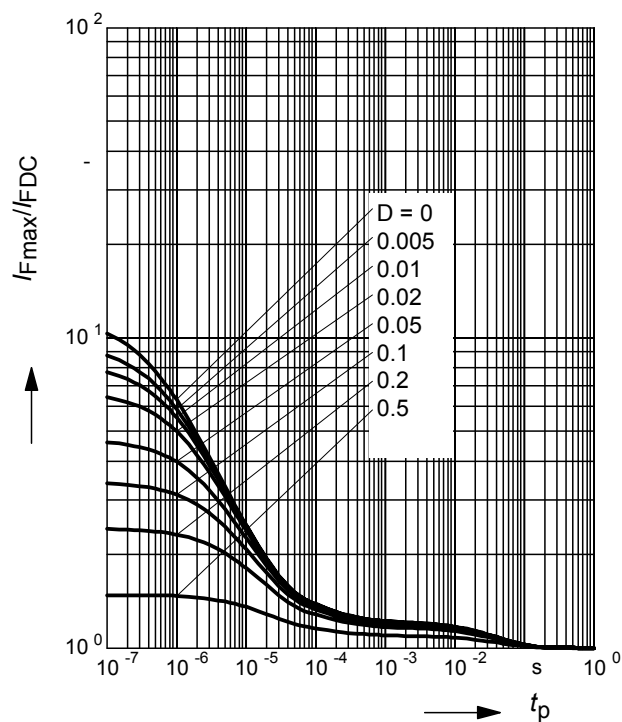
BAT68-07W



Permissible Pulse Load

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

BAT68-07W



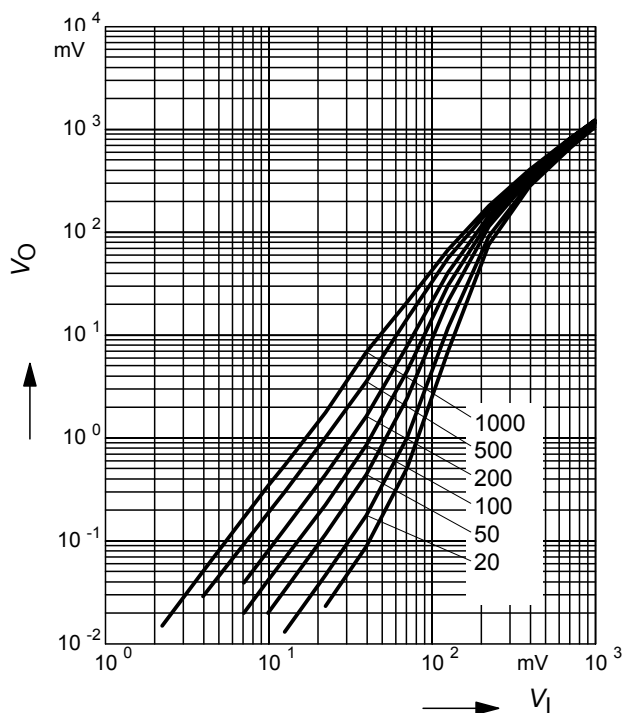


BAT68...

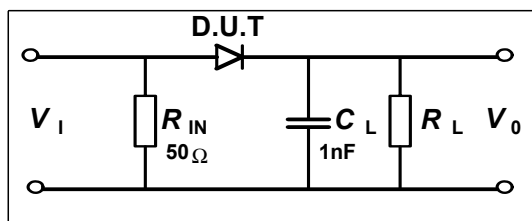
Rectifier voltage $V_{\text{out}} = f(V_{\text{in}})$

$f = 900\text{MHz}$

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



Testcircuit

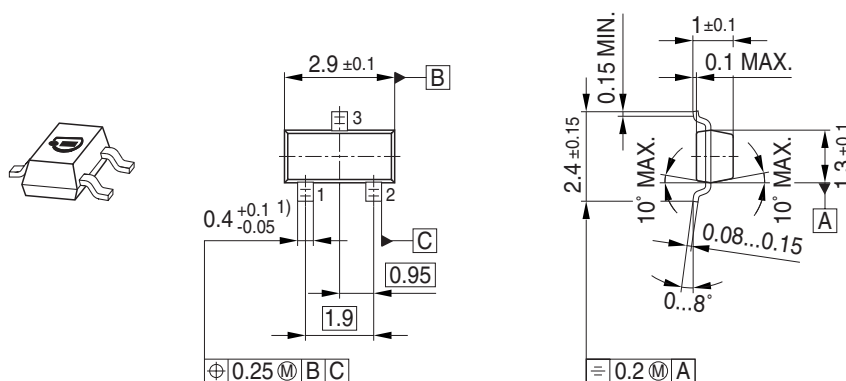




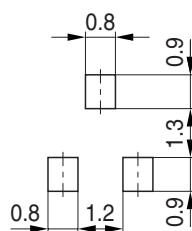
Package SOT23

BAT68...

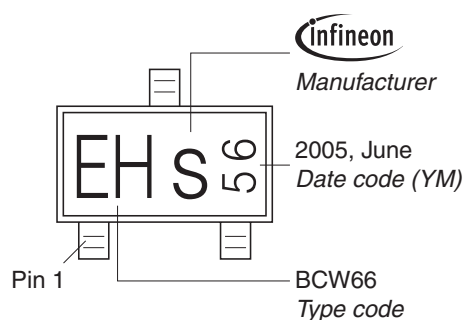
Package Outline



Foot Print

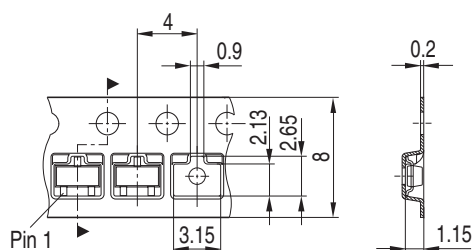


Marking Layout (Example)



Standard Packing

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

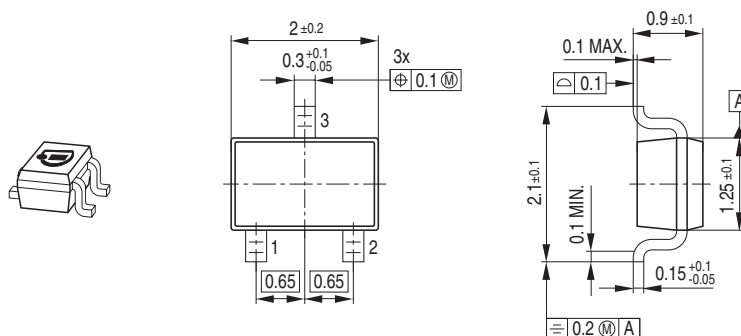




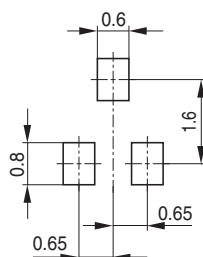
Package SOT323

BAT68...

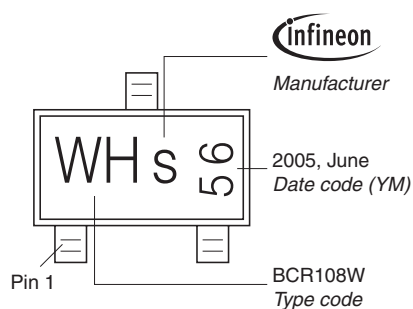
Package Outline



Foot Print

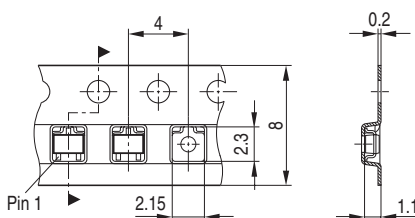


Marking Layout (Example)



Standard Packing

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

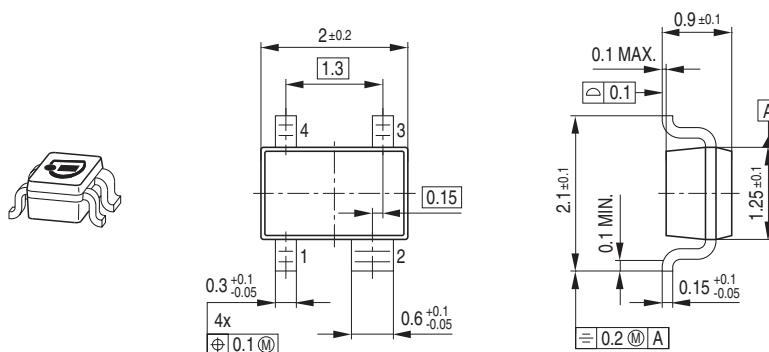




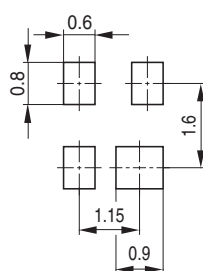
Package SOT343

BAT68...

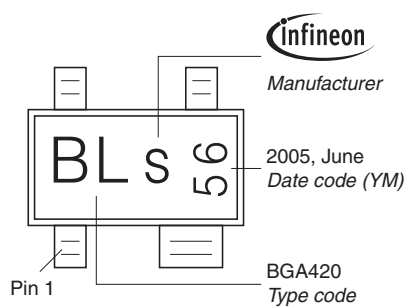
Package Outline



Foot Print

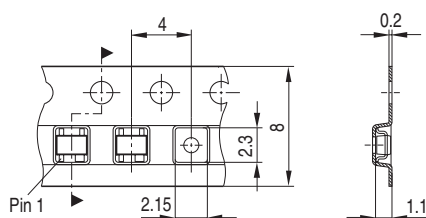


Marking Layout (Example)



Standard Packing

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

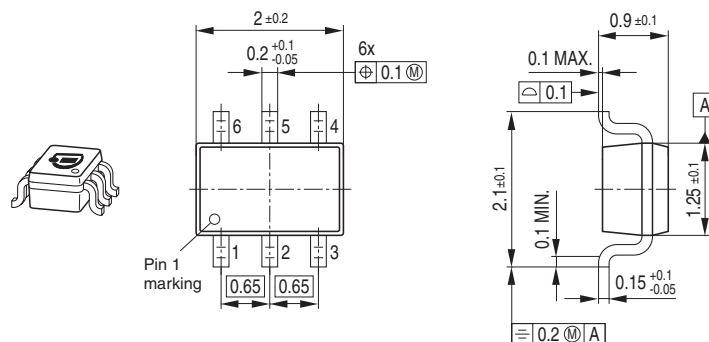




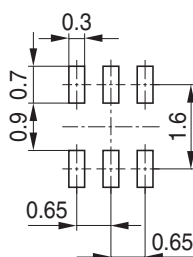
Package SOT363

BAT68...

Package Outline

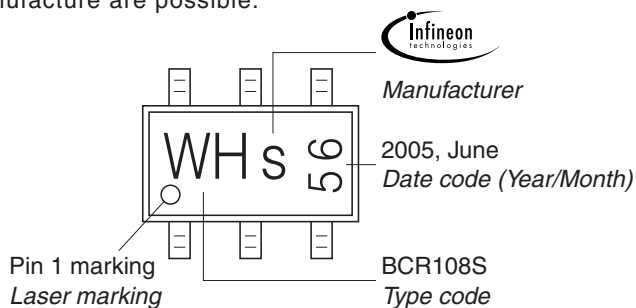


Foot Print



Marking Layout (Example)

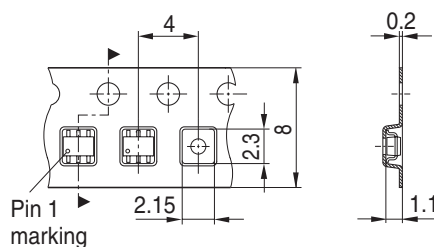
Small variations in positioning of Date code, Type code and Manufacture are possible.



Standard Packing

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

For symmetric types no defined Pin 1 orientation in reel.





BAT68...

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