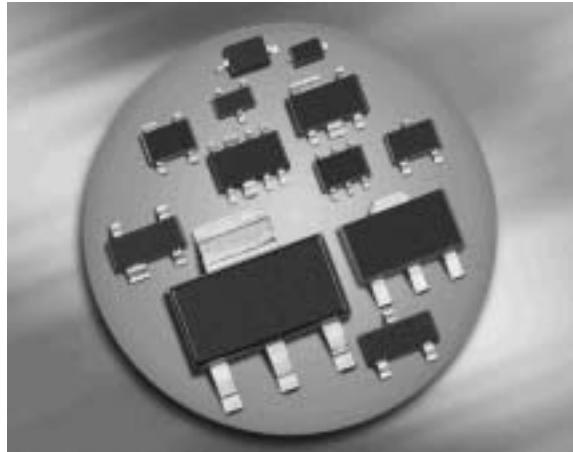
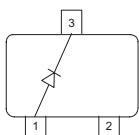


Silicon Schottky Diode

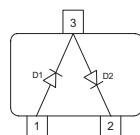
- For mixer applications in VHF/UHF range
- For high-speed switching application
- Pb-free (RoHS compliant) package¹⁾
- Qualified according AEC Q101



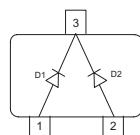
BAT17



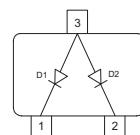
**BAT17-04
BAT17-04W**



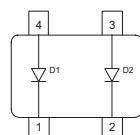
**BAT17-05
BAT17-05W**



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

¹Pb-containing package may be available upon special request

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 BAT17, $T_S \leq 77^\circ\text{C}$ BAT17-04, $T_S \leq 61^\circ\text{C}$ BAT17-05, $T_S \leq 46^\circ\text{C}$ BAT17-04W, -05W, -6W, $T_S \leq 92^\circ\text{C}$ BAT17-07, $T_S \leq 60^\circ\text{C}$	P_{tot}	150 150 150 150 150	mW
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⁾ BAT17 BAT17-04, BAT17-07 BAT17-05 BAT17-04W, BAT17-05W, BAT17-06W	R_{thJS}	≤ 490 ≤ 590 ≤ 690 ≤ 390	K/W

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

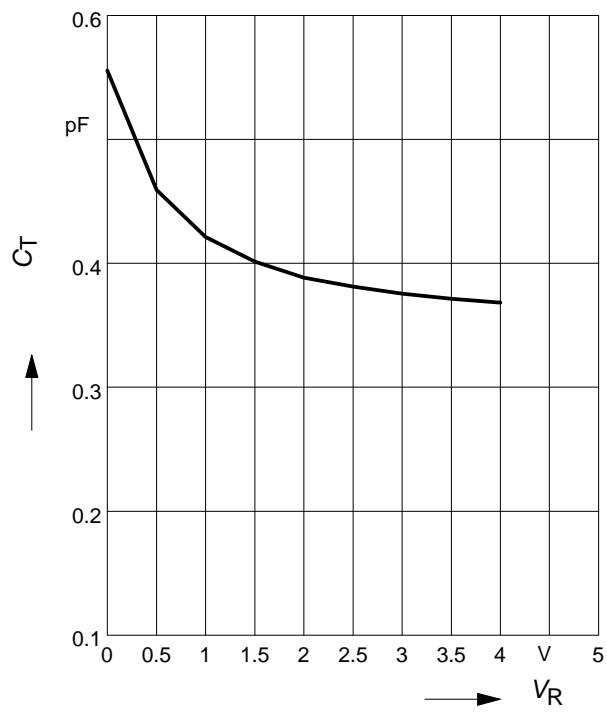
Electrical Characteristics at $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Breakdown voltage $I_{(\text{BR})} = 10 \mu\text{A}$	$V_{(\text{BR})}$	4	-	-	V
Reverse current $V_R = 3 \text{ V}$ $V_R = 4 \text{ V}$ $V_R = 3 \text{ V}, T_A = 60^\circ\text{C}$	I_R	-	-	0.25	μA
		-	-	10	
		-	-	1.25	
Forward voltage $I_F = 0.1 \text{ mA}$ $I_F = 1 \text{ mA}$ $I_F = 10 \text{ mA}$	V_F	200	275	350	mV
		250	340	450	
		350	425	600	
	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.

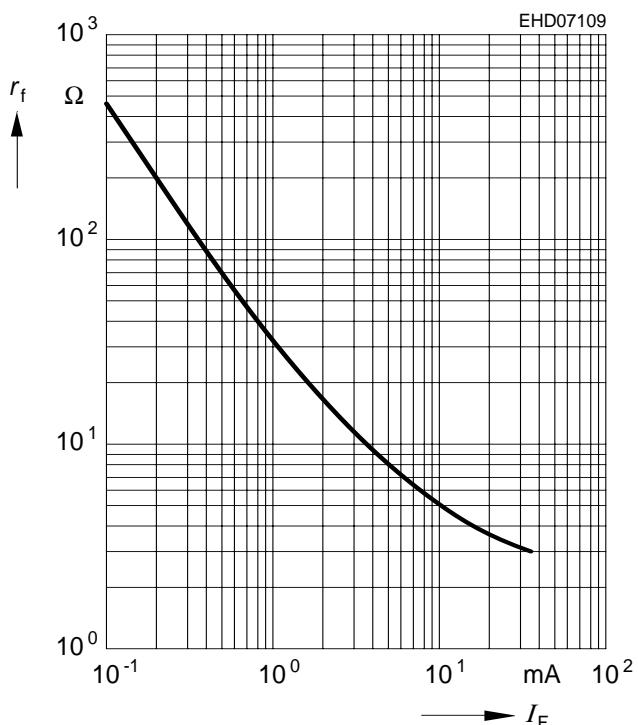
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



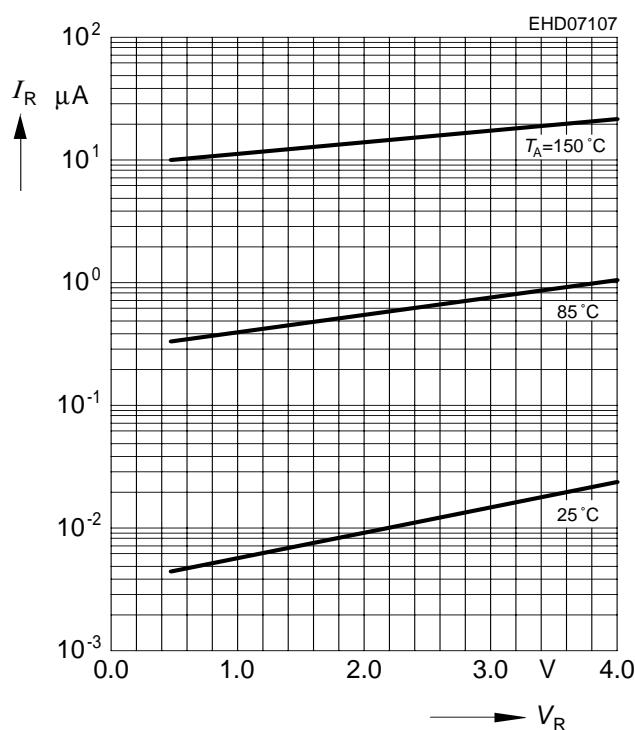
Forward resistance $r_f = f(I_F)$

$f = 10\text{kHz}$



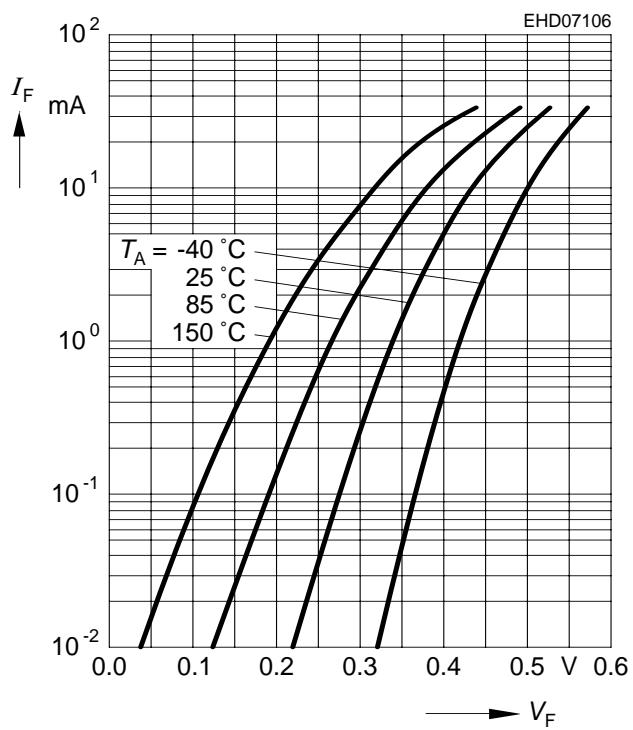
Reverse current $I_R = f(V_R)$

$T_A = \text{Parameter}$

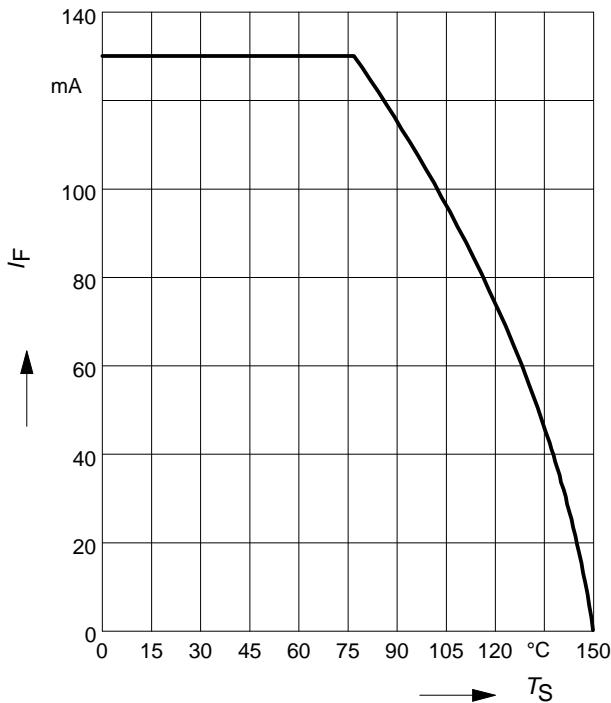


Forward current $I_F = f(V_F)$

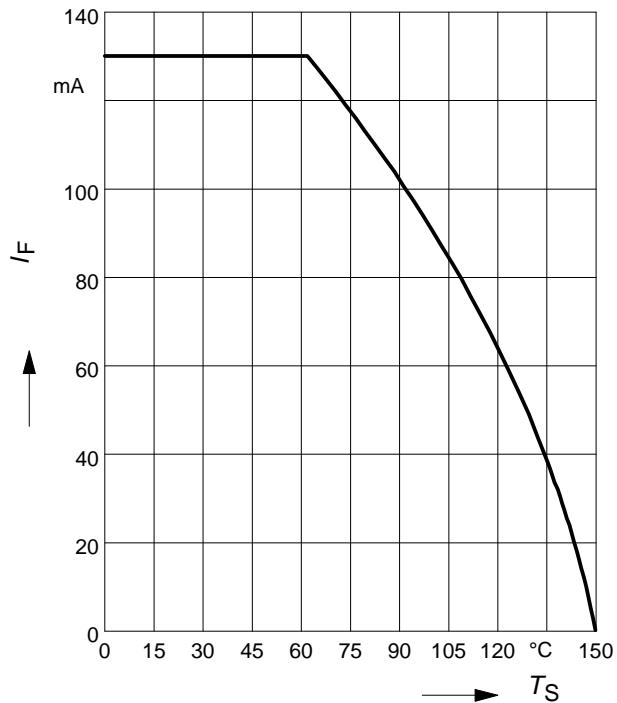
$T_A = \text{Parameter}$



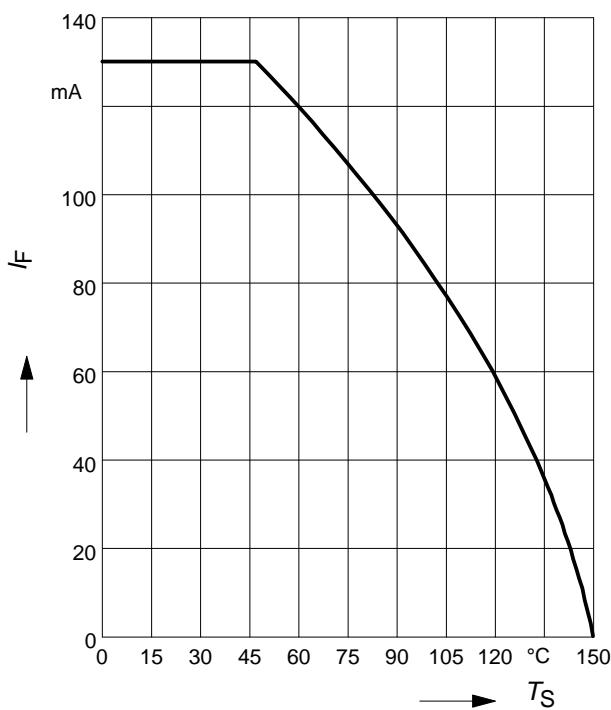
Forward current $I_F = f (T_S)$
BAT17



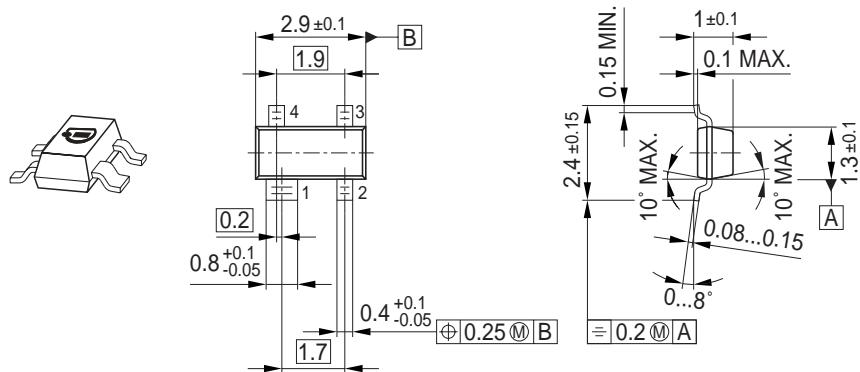
Forward current $I_F = f (T_S)$
BAT17-04, BAT17-07



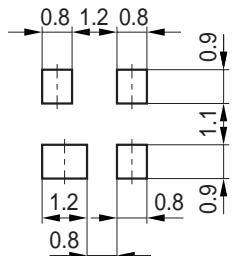
Forward current $I_F = f (T_S)$
BAT17-05



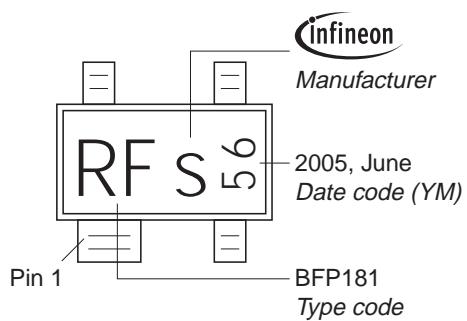
Package Outline



Foot Print

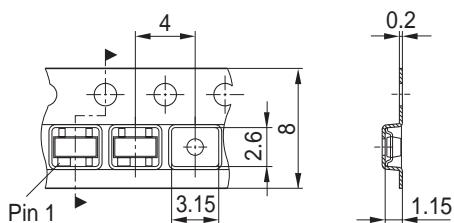


Marking Layout (Example)

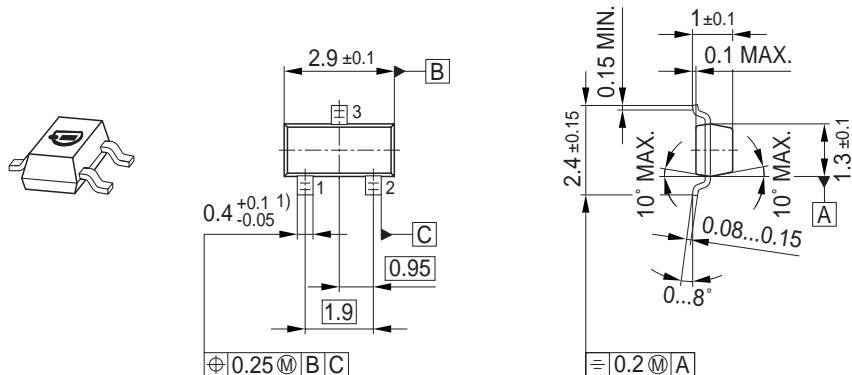


Standard Packing

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

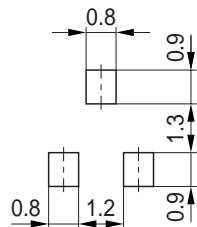


Package Outline

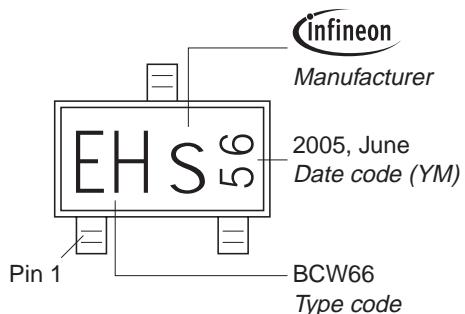


1) Lead width can be 0.6 max. in dambar area

Foot Print

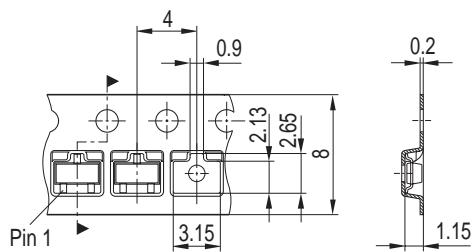


Marking Layout (Example)

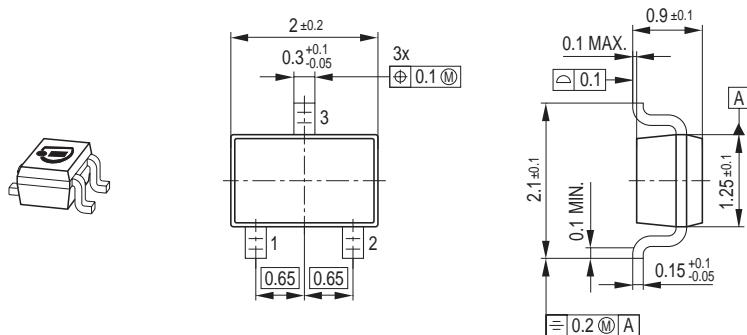


Standard Packing

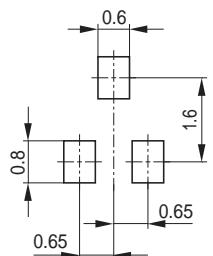
Reel ø180 mm = 3.000 Pieces/Reel
Reel ø330 mm = 10.000 Pieces/Reel



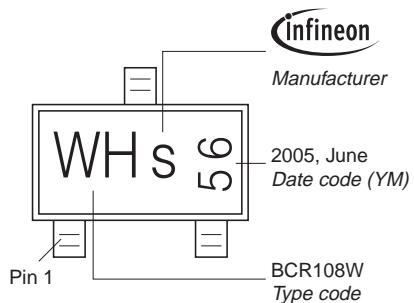
Package Outline



Foot Print

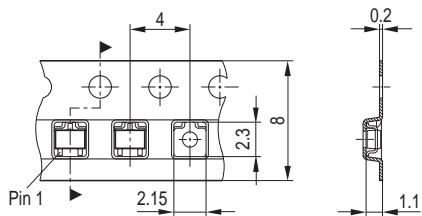


Marking Layout (Example)



Standard Packing

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



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