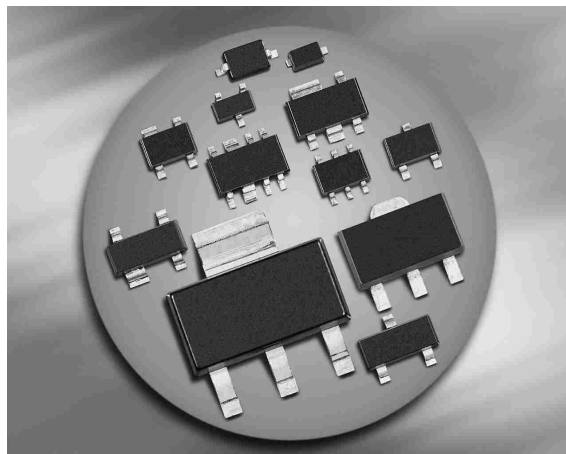
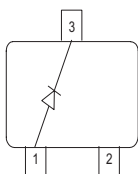


Silicon Schottky Diode

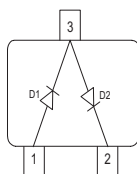
- For mixer applications in VHF/UHF range
- For high-speed switching application
- Pb-free (RoHS compliant) package



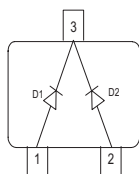
BAT17



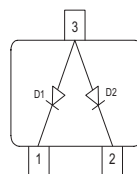
BAT17-04 BAT17-04W



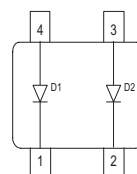
BAT17-05 BAT17-05W



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

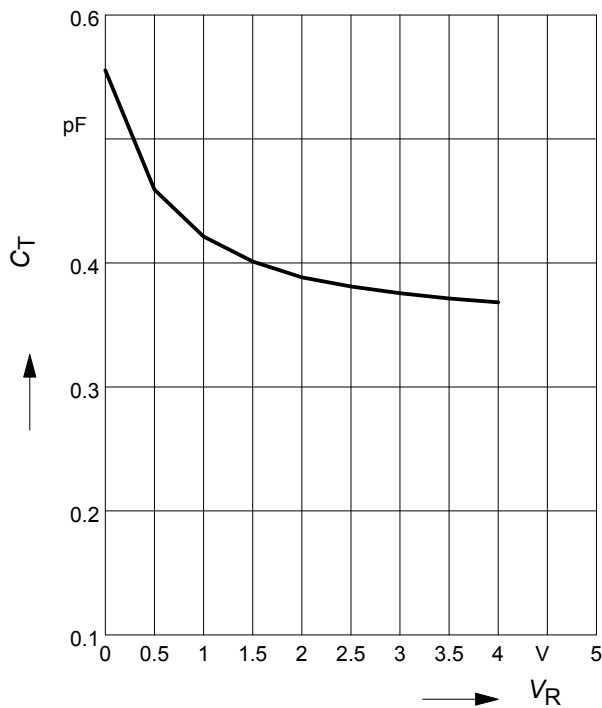
Electrical Characteristics at $T_A = 25^\circ\text{C}$, unless otherwise specified

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

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

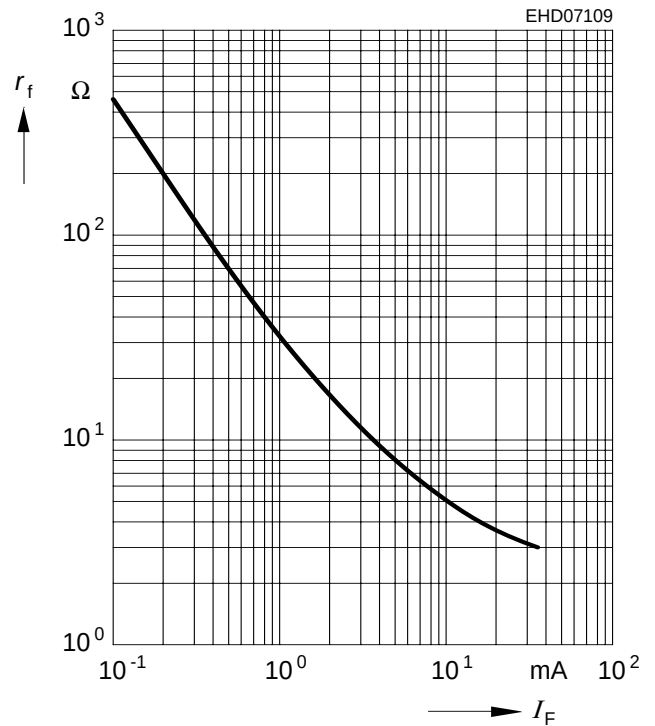
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



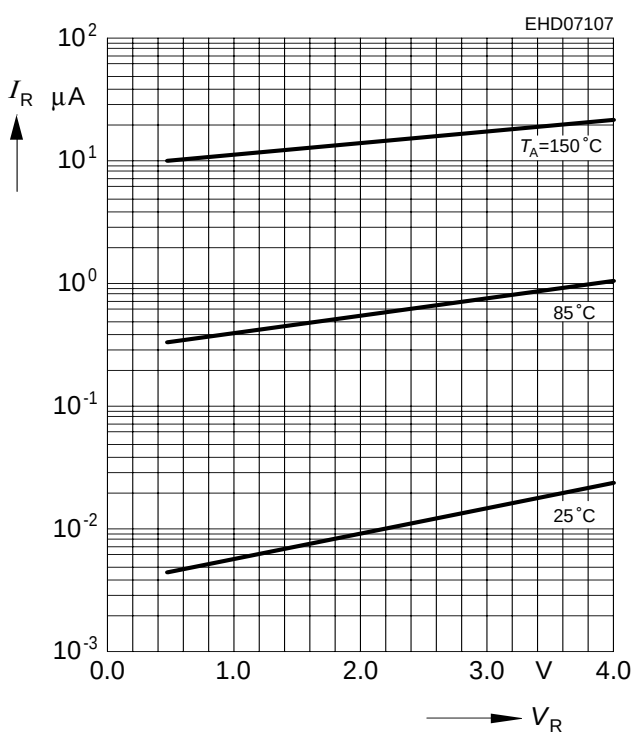
Forward resistance $r_f = f(I_F)$

$f = 10\text{kHz}$



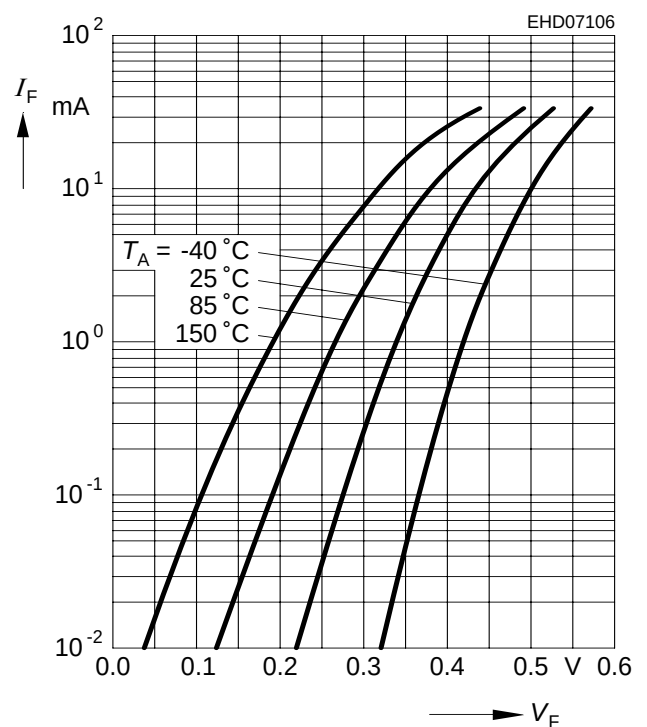
Reverse current $I_R = f(V_R)$

$T_A = \text{Parameter}$



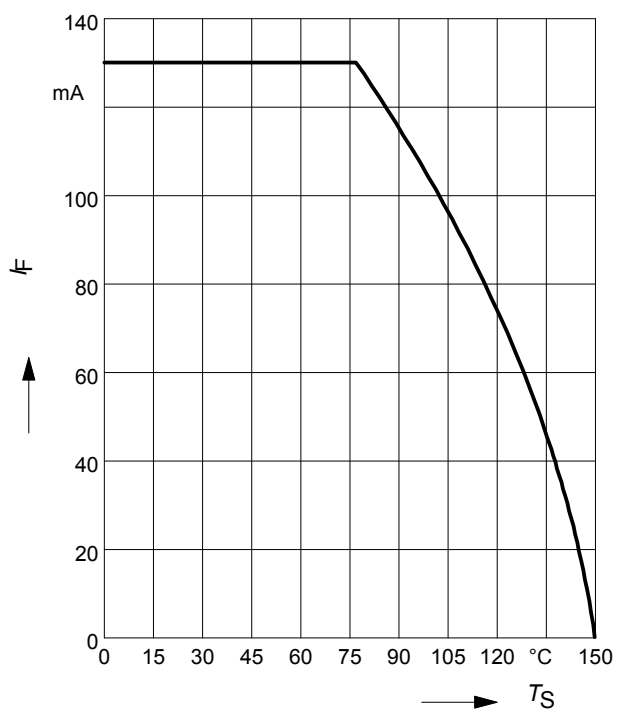
Forward current $I_F = f(V_F)$

$T_A = \text{Parameter}$



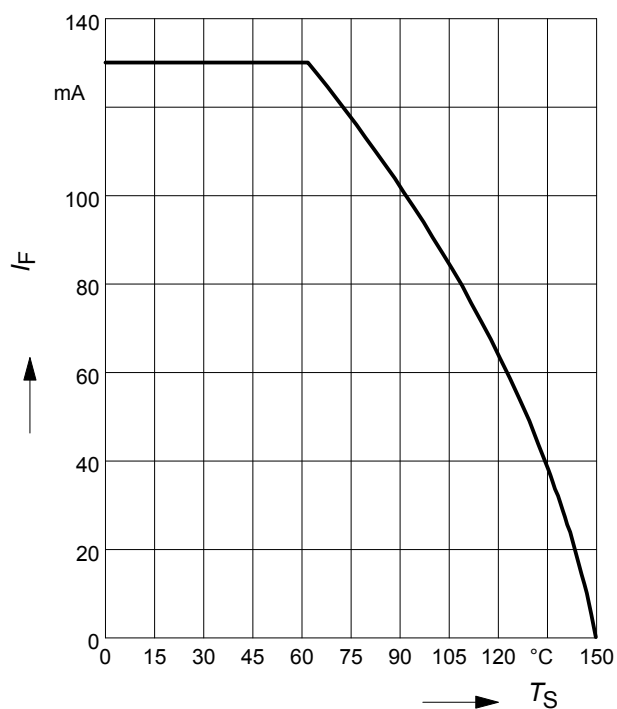
Forward current $I_F = f(T_S)$

BAT17



Forward current $I_F = f(T_S)$

BAT17-04, BAT17-07



Forward current $I_F = f(T_S)$

BAT17-05

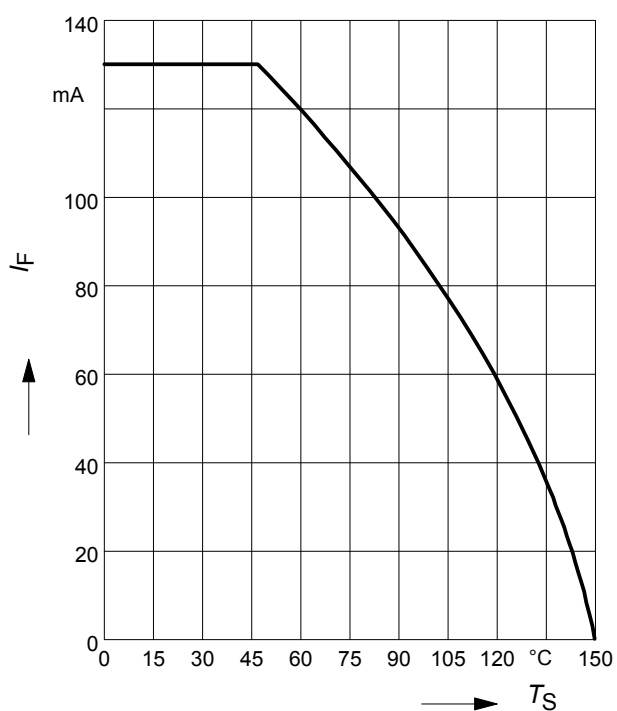


Figure 1: Marking of the BFP181 package

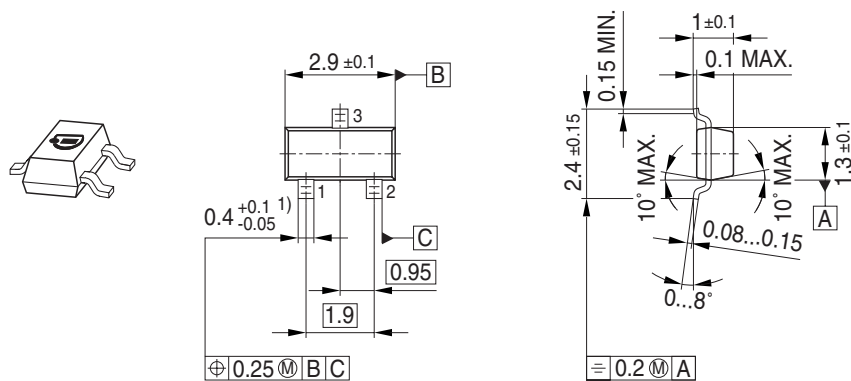
The diagram illustrates the marking on the BFP181 package. The marking area contains the text 'RF S 56'. The following table summarizes the callouts and their corresponding parts of the package marking:

Callout	Marking Detail
Manufacturer	infineon
Date code (YM)	2005, June
Pin 1	Bottom-left pin
Type code	BFP181

Technical drawing of a mechanical part showing top and side views with dimensions:

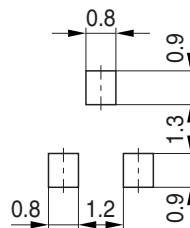
- Top View Dimensions:**
 - Overall width: 4
 - Overall height: 8
 - Distance from left edge to first hole center: 3.15
 - Distance between hole centers: 2.6
 - Distance from last hole center to right edge: 0.2
- Side View Dimensions:**
 - Overall height: 1.15
 - Distance from bottom edge to hole center: 0.2
- Other Features:**
 - Three circular holes are shown in the top view.
 - A rectangular feature labeled "Pin 1" is located on the left side.
 - Section lines are present in the side view, indicating a cross-section.

Package Outline

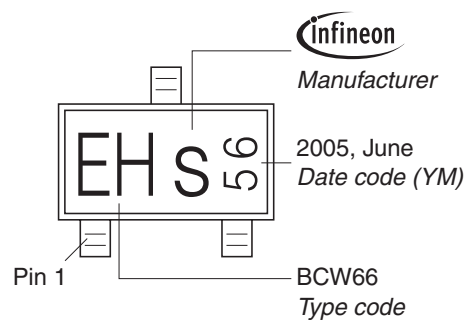


1) Lead width can be 0.6 max. in dambar area

Foot Print

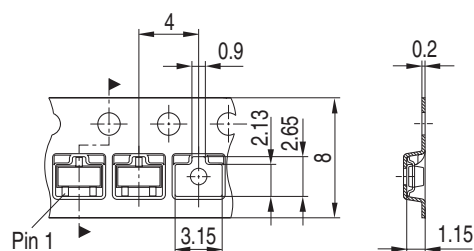


Marking Layout (Example)

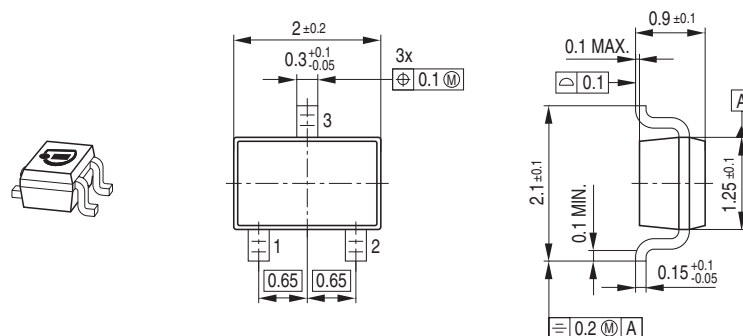


Standard Packing

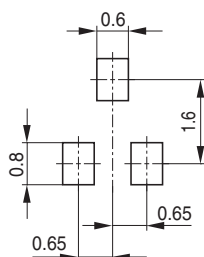
Reel ø180 mm = 3.000 Pieces/Reel
Reel ø330 mm = 10.000 Pieces/Reel



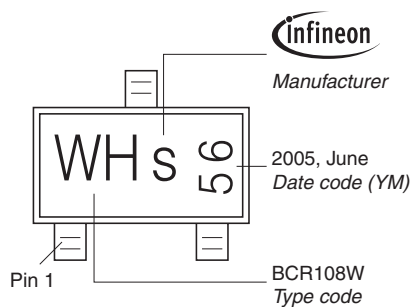
Package Outline



Foot Print

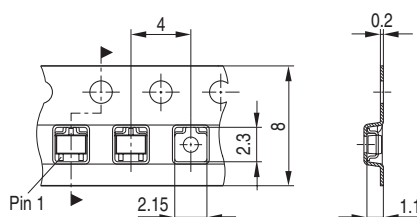


Marking Layout (Example)



Standard Packing

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



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