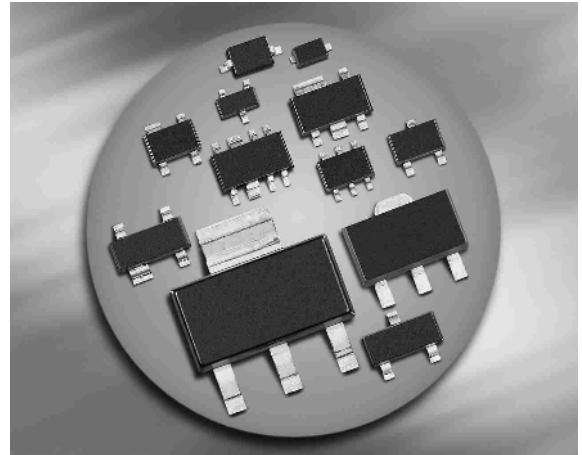
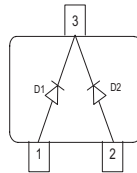
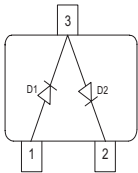


**Silicon RF Switching Diode**

- Low-loss VHF / UHF switch above 10 MHz
- PIN diode with low forward resistance
- Pb-free (RoHS compliant) package


**BAT18-04**
**BAT18-05**


Type	Package	Configuration	$L_S$ (nH)	Marking
BAT18-04	SOT23	series	1.8	AUs
BAT18-05	SOT23	common cathode	1.8	ASs

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

Parameter	Symbol	Value	Unit
Diode reverse voltage	$V_R$	35	V
Forward current	$I_F$	100	mA
Junction temperature	$T_j$	150	°C
Operating temperature range	$T_{op}$	-55 ... 125	
Storage temperature	$T_{stg}$	-55 ... 150	

**Thermal Resistance**

Parameter	Symbol	Value	Unit
Junction - soldering point <sup>1)</sup> BAT18-04, BAT18-05	$R_{thJS}$	≤ 290	K/W

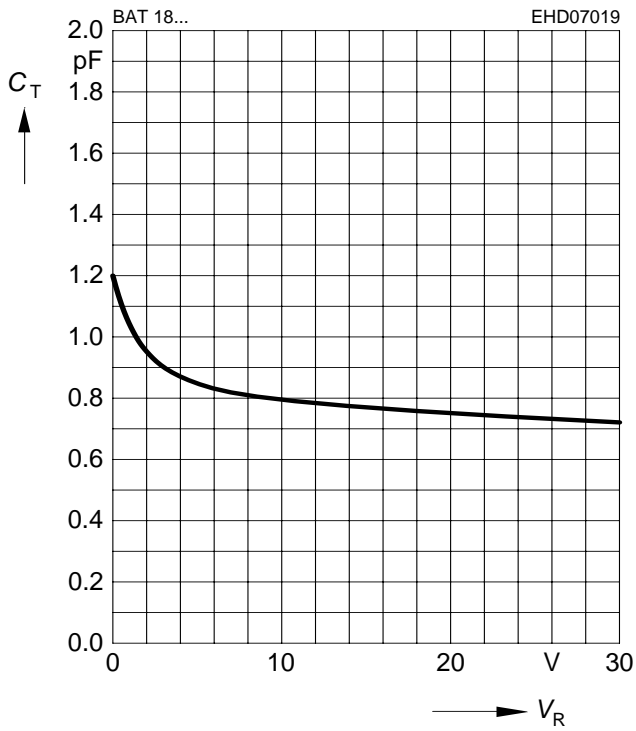
<sup>1</sup>For calculation of  $R_{thJA}$  please refer to Application Note Thermal Resistance

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
<b>DC Characteristics</b>					
Reverse current $V_R = 20\text{ V}$ $V_R = 20\text{ V}, T_A = 60^\circ\text{C}$	$I_R$	-	-	20 200	nA
Forward voltage $I_F = 100\text{ mA}$	$V_F$	-	0.92	1.2	V
<b>AC Characteristics</b>					
Diode capacitance $V_R = 20\text{ V}, f = 1\text{ MHz}$	$C_T$	-	0.75	1	pF
Forward resistance $I_F = 5\text{ mA}, f = 100\text{ MHz}$	$r_f$	-	0.4	0.7	$\Omega$
Charge carrier life time $I_F = 10\text{ mA}, I_R = 6\text{ mA}$ , measured at $I_R = 3\text{ mA}$ , $R_L = 100\ \Omega$	$\tau_{rr}$	-	120	-	ns
I-region width	$W_I$	-	3	-	$\mu\text{m}$

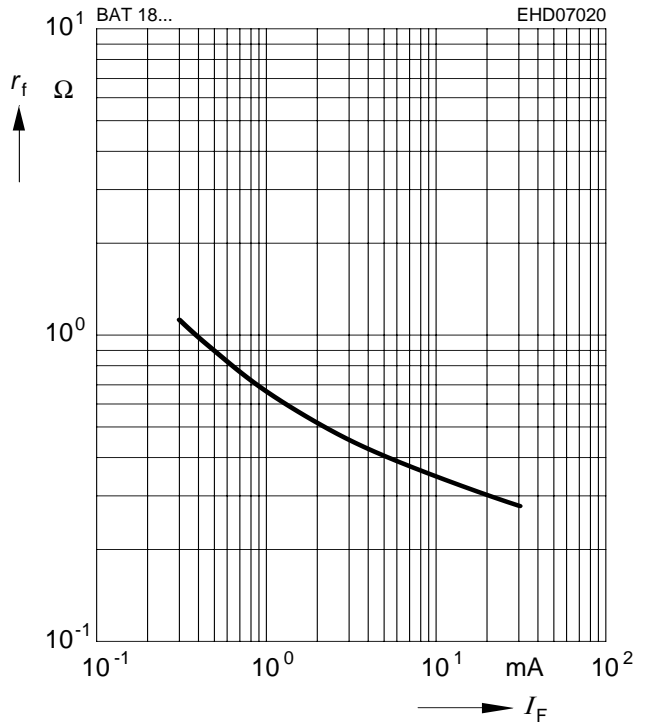
**Diode capacitance  $C_T = f(V_R)$**

$f = 1\text{MHz}$

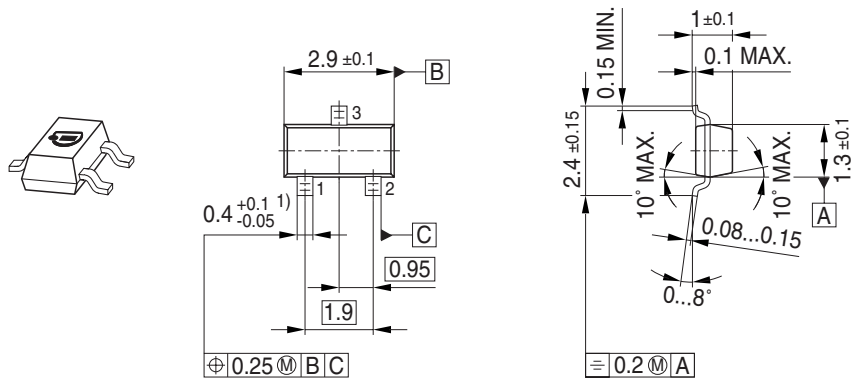


**Forward resistance  $r_f = f(I_F)$**

$f = 100\text{MHz}$

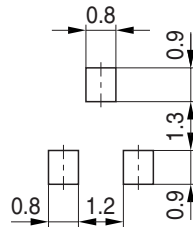


Package Outline

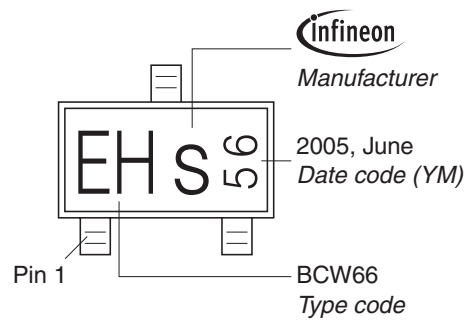


1) Lead width can be 0.6 max. in dambar area

Foot Print

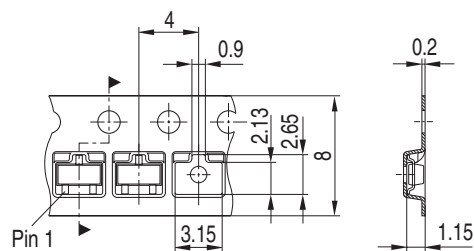


Marking Layout (Example)



Standard Packing

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



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