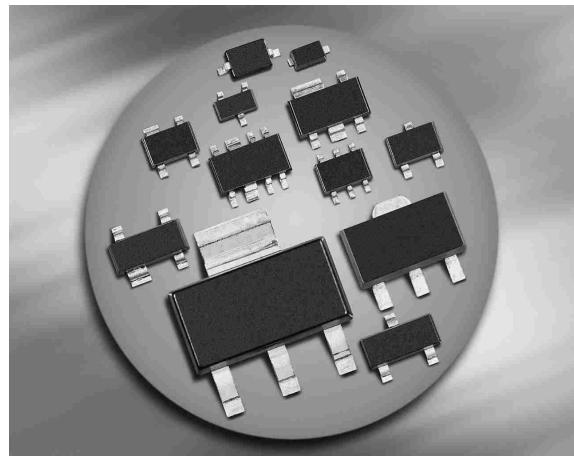


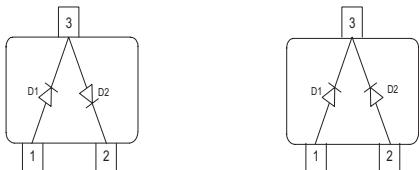
Silicon RF Switching Diode

- 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	$^\circ\text{C}$
Operating temperature range	T_{op}	-55 ... 125	
Storage temperature	T_{stg}	-55 ... 150	

Thermal Resistance

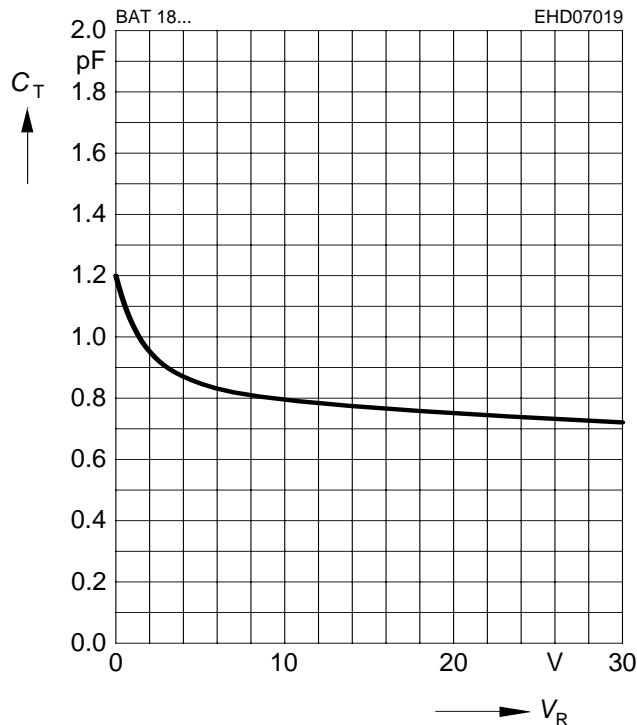
Parameter	Symbol	Value	Unit
Junction - soldering point ¹⁾ BAT18-04, BAT18-05	R_{thJS}	≤ 290	K/W

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

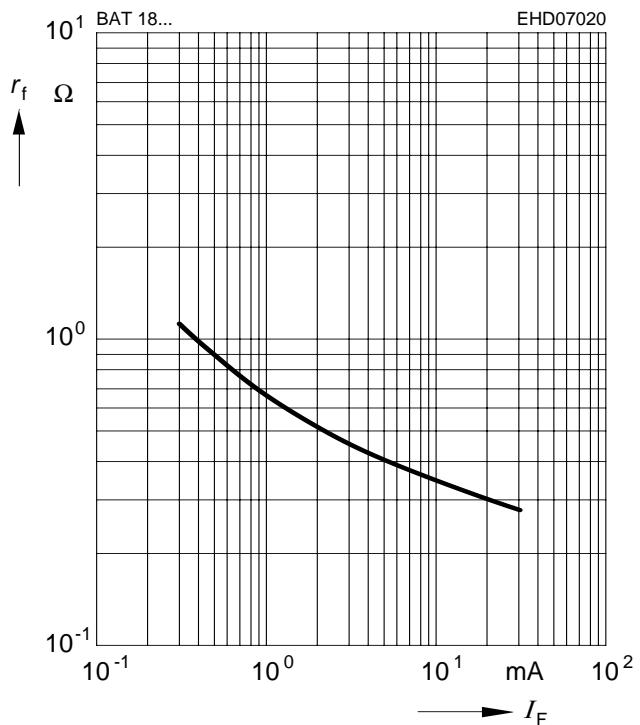
Electrical Characteristics at $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Reverse current $V_R = 20 \text{ V}$	I_R	-	-	20	nA
$V_R = 20 \text{ V}, T_A = 60^\circ\text{C}$		-	-	200	
Forward voltage $I_F = 100 \text{ mA}$	V_F	-	0.92	1.2	V
AC Characteristics					
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	Ω
Charge carrier life time $I_F = 10 \text{ mA}, I_R = 6 \text{ mA}$, measured at $I_R = 3 \text{ mA}$, $R_L = 100 \Omega$	τ_{rr}	-	120	-	ns
I-region width	W_I	-	3	-	μm

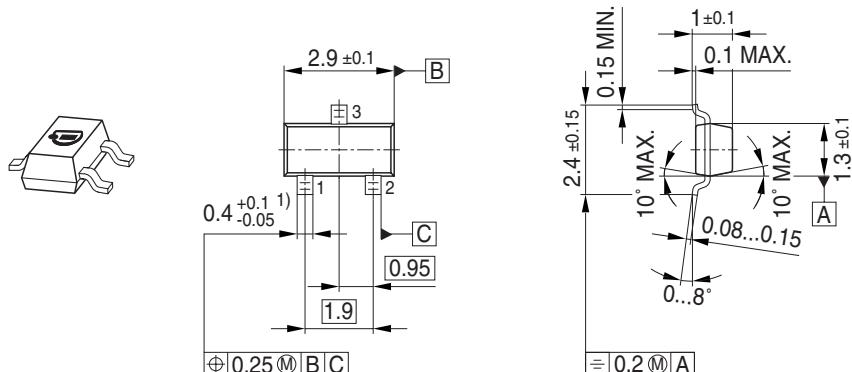
Diode capacitance $C_T = f (V_R)$
 $f = 1\text{MHz}$



Forward resistance $r_f = f (I_F)$
 $f = 100\text{MHz}$

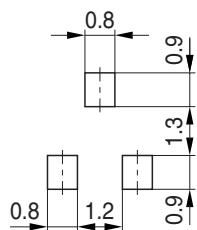


Package Outline

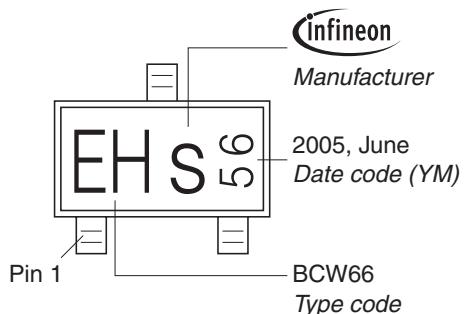


1) Lead width can be 0.6 max. in dambar area

Foot Print

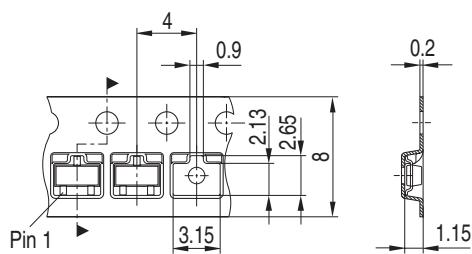


Marking Layout (Example)



Standard Packing

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



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