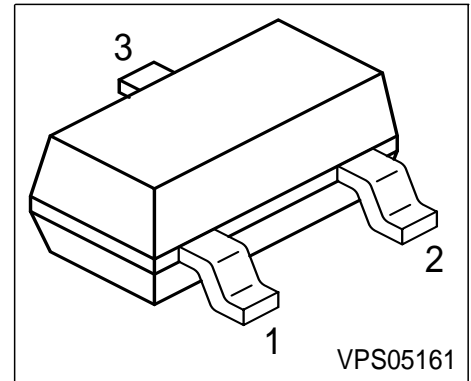
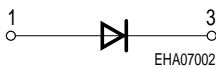


## Silicon Schottky Diode

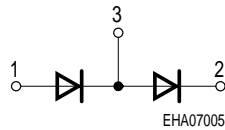
- For mixer applications in VHF/UHF range
- For high-speed switching application



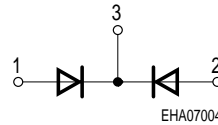
### BAT17



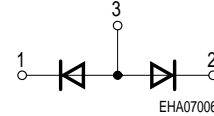
### BAT17-04



### BAT17-05



### BAT17-06



Type	Marking	Pin Configuration			Package
BAT17	53s	1 = A	2 n.c.	3 = C	SOT23
BAT17-04	54s	1 = A1	2 = C2	3 = C1/A2	SOT23
BAT17-05	55s	1 = A1	2 = A2	3 = C1/2	SOT23
BAT17-06	56s	1 = C1	2 = C2	3 = A1/2	SOT23

## Maximum Ratings

Parameter	Symbol	Value	Unit
Diode reverse voltage	$V_R$	4	V
Forward current	$I_F$	130	mA
Total power dissipation	$P_{tot}$		mW
$T_S \leq 77^\circ\text{C}$ , BAT17		150	
$T_S \leq 61^\circ\text{C}$ , BAT17-04/BAT17-06		150	
$T_S \leq 46^\circ\text{C}$ , BAT17-05		150	
Junction temperature	$T_j$	150	$^\circ\text{C}$
Operating temperature range	$T_{op}$	-55 ... 150	
Storage temperature	$T_{stg}$	-55 ... 150	

## Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point <sup>1)</sup>	$R_{thJS}$		K/W
BAT17		$\leq 490$	
BAT17-04/BAT17-06		$\leq 590$	
BAT17-05		$\leq 690$	

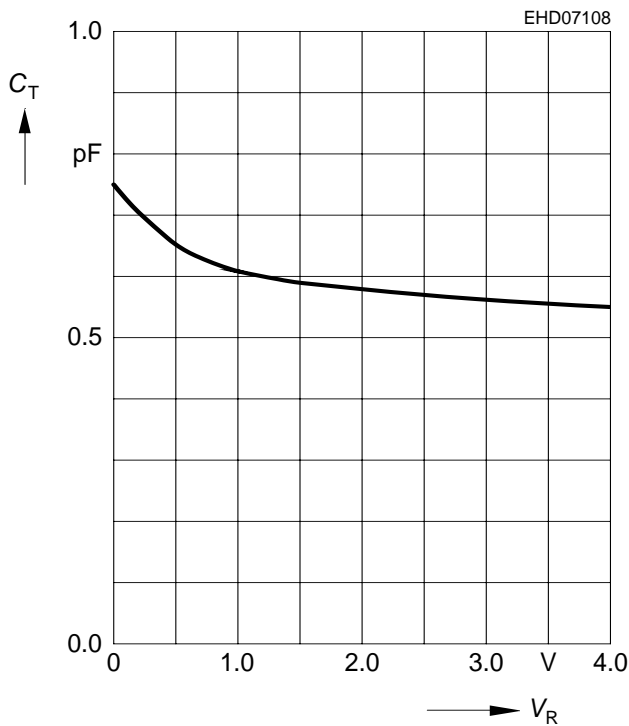
<sup>1)</sup>For calculation of  $R_{thJA}$  please refer to Application Note Thermal Resistance

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

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

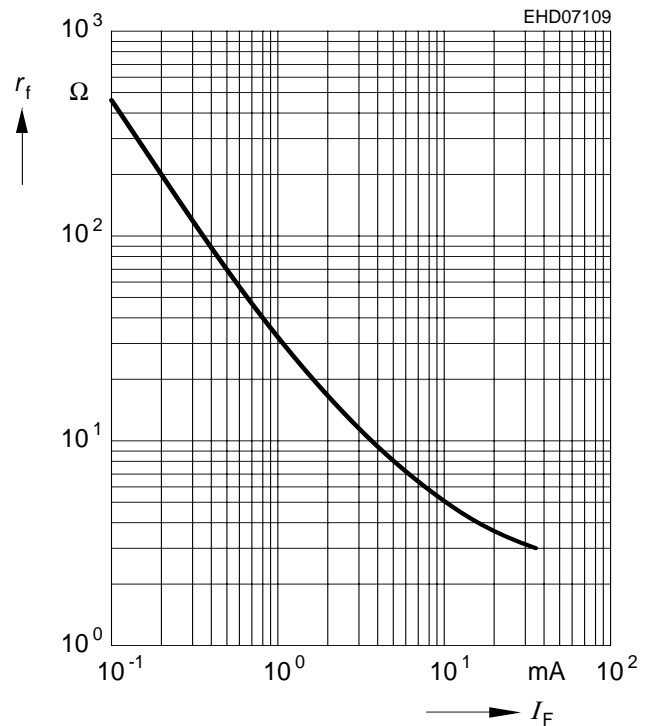
**Diode capacitance**  $C_T = f(V_R)$

$f = 1\text{MHz}$



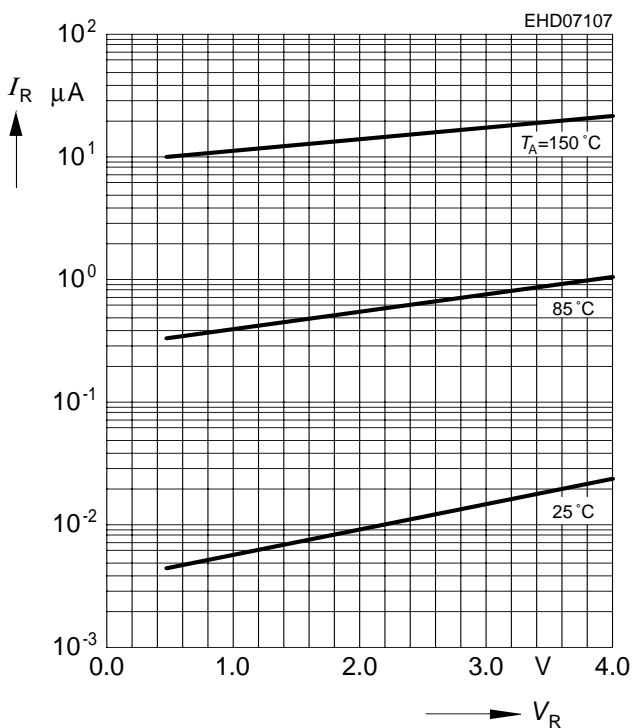
**Forward resistance**  $r_f = f(I_F)$

$f = 10\text{kHz}$



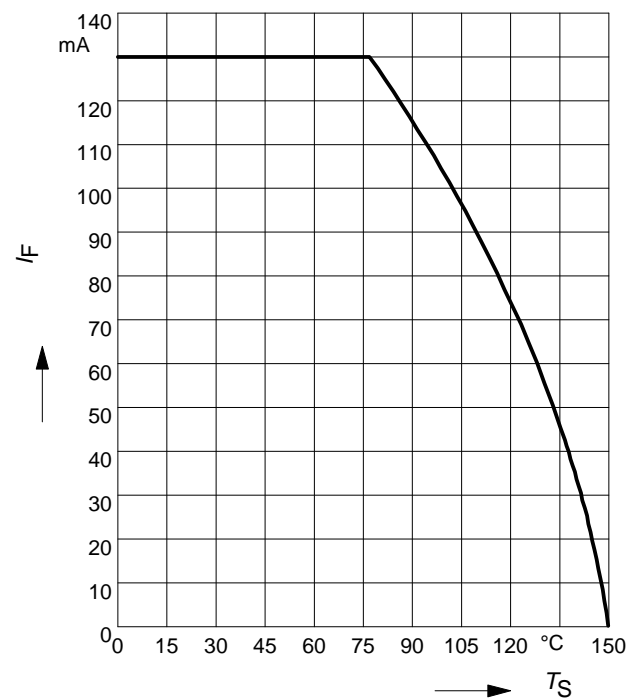
**Reverse current**  $I_R = f(V_R)$

$T_A = \text{Parameter}$



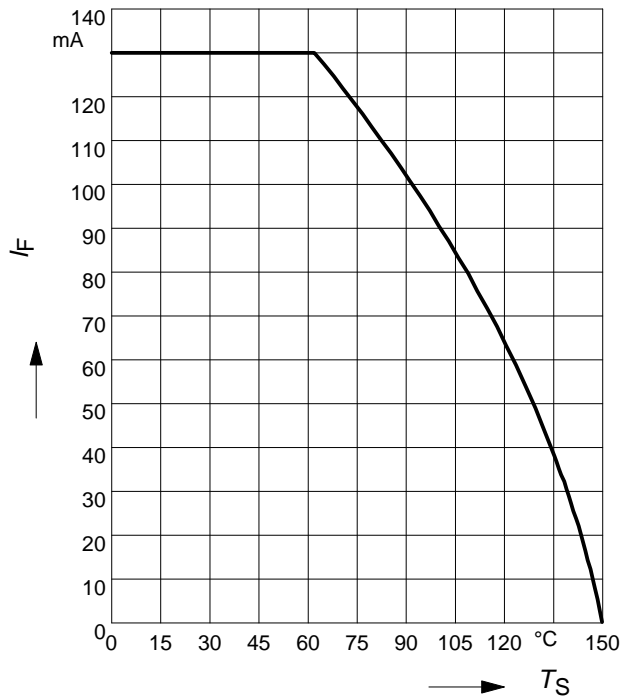
**Forward current**  $I_F = f(T_S)$

BAT17



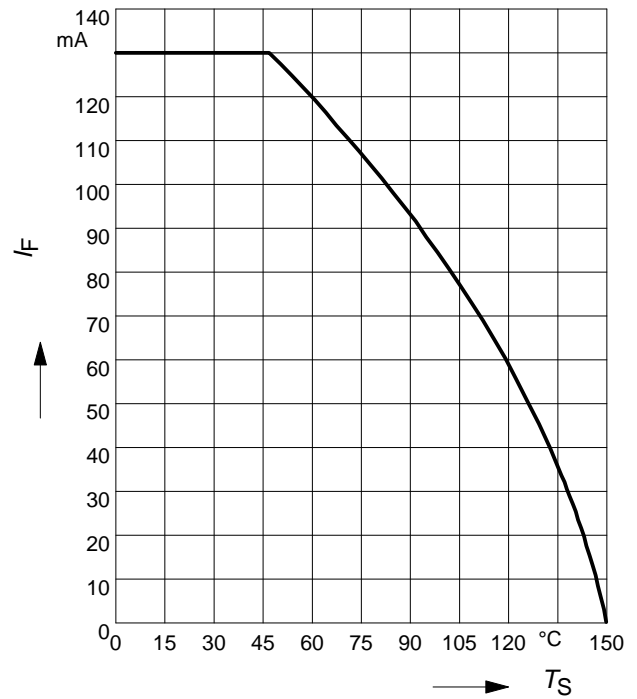
**Forward current  $I_F = f(T_S)$**

BAT17-04/BAT17-06



**Forward current  $I_F = f(T_S)$**

BAT17-05



**Forward current  $I_F = f(V_F)$**

$T_A$  = Parameter

