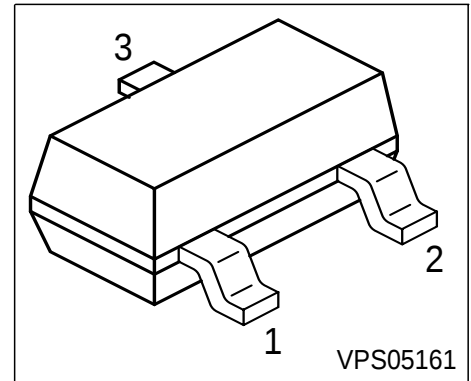
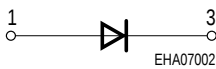


Silicon Schottky Diodes

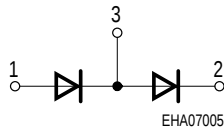
- General-purpose diode for high-speed switching
- Circuit protection
- Voltage clamping
- High-level detecting and mixing



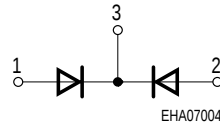
BAS70



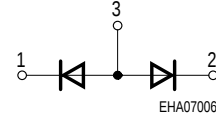
BAS70-04



BAS70-05



BAS70-06



Type	Marking	Pin Configuration			Package
BAS70	73s	1 = A	2 n.c.	3 = C	SOT23
BAS70-04	74s	1 = A1	2 = C2	3 = C1/A2	SOT23
BAS70-05	75s	1 = A1	2 = A2	3 = C1/C2	SOT23
BAS70-06	76s	1 = C1	2 = C2	3 = A1/A2	SOT23

Maximum Ratings

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	70	V
Forward current	I_F	70	mA
Surge forward current, $t \leq 10\text{ms}$	I_{FSM}	100	
Total power dissipation	P_{tot}		mW
$T_S \leq 72^\circ\text{C}$, BAS70		250	
$T_S \leq 48^\circ\text{C}$, BAS70-04; BAS70-06		250	
$T_S \leq 22^\circ\text{C}$, BAS70-05		250	
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 ¹⁾	R_{thJS}		K/W
BAS70		≤ 310	
BAS70-04; BAS70-06		≤ 410	
BAS70-05		≤ 510	

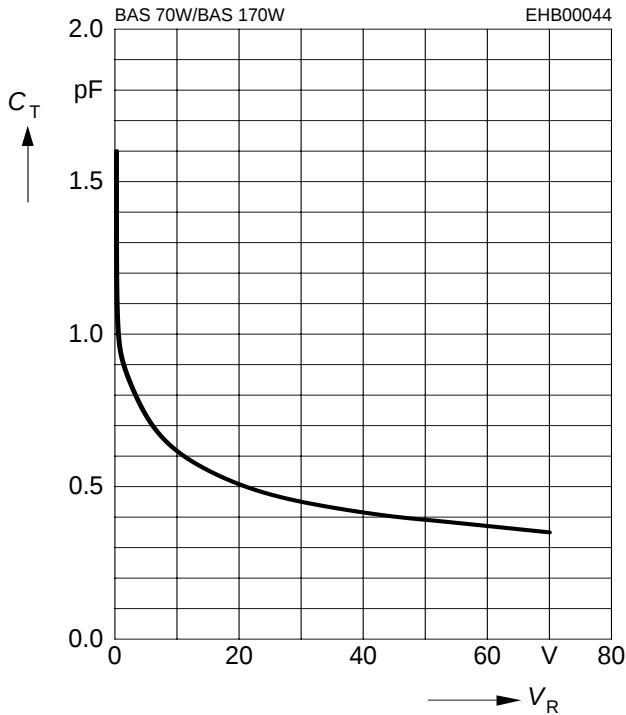
¹⁾For calculation of R_{thJA} please refer to Application Note Thermal Resistance

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Breakdown voltage $I_{(BR)} = 10\ \mu\text{A}$	$V_{(BR)}$	70	-	-	V
Reverse current $V_R = 50\ \text{V}$	I_R	-	-	0.1	μA
Forward voltage $I_F = 1\ \text{mA}$ $I_F = 10\ \text{mA}$ $I_F = 15\ \text{mA}$	V_F	- - -	375 705 880	410 750 1000	mV
AC Characteristics					
Diode capacitance- $V_R = 0\ \text{V}$, $f = 1\ \text{MHz}$	C_T	-	1.6	2	pF
Differential forward resistance $I_F = 10\ \text{mA}$, $f = 10\ \text{kHz}$	r_f	-	30	-	Ω
Charge carrier life time $I_F = 25\ \text{mA}$	τ_{rr}	-	-	100	ps

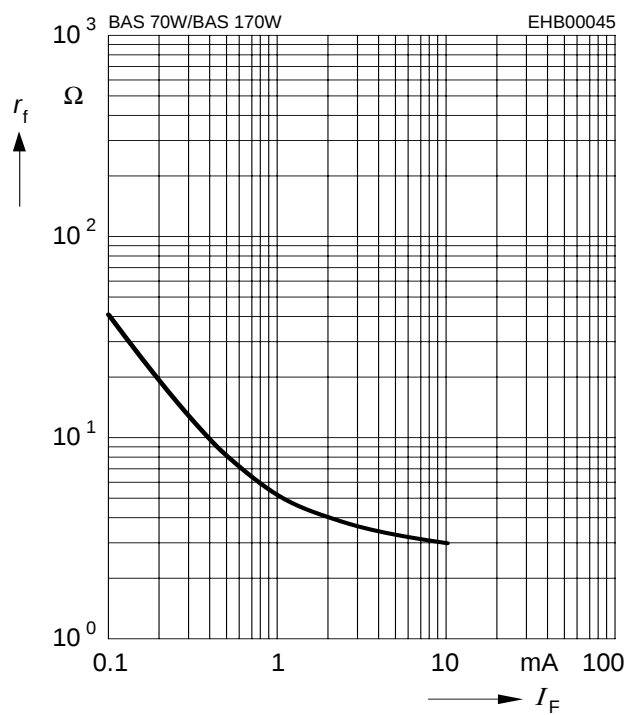
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



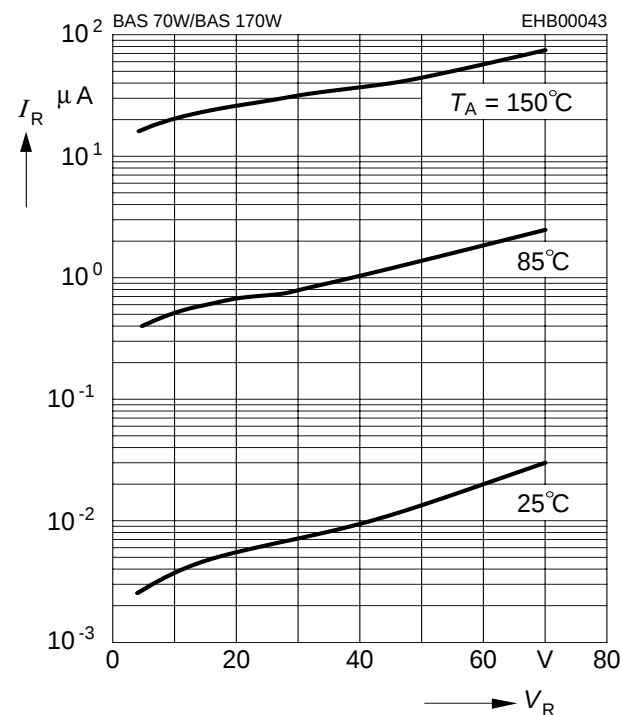
Differential forward resistance $r_f = f(I_F)$

$f = 1\text{MHz}$



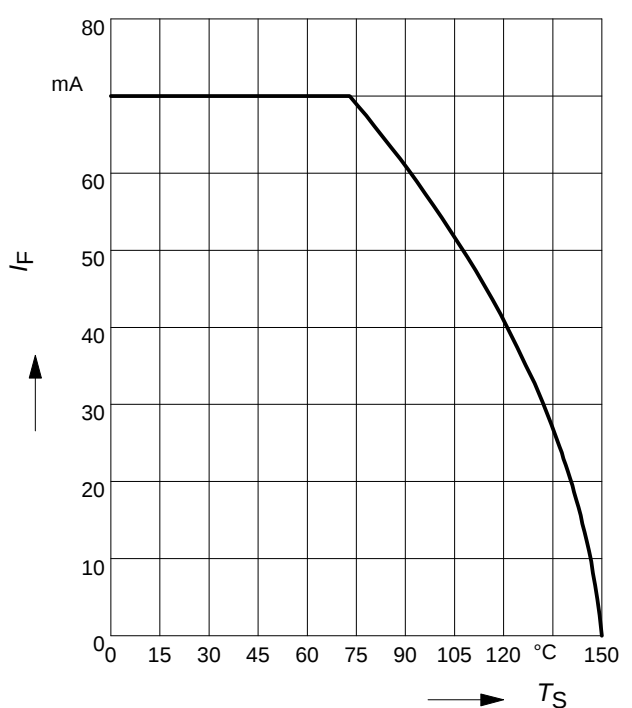
Reverse current $I_R = f(V_R)$

$T_A = \text{Parameter}$



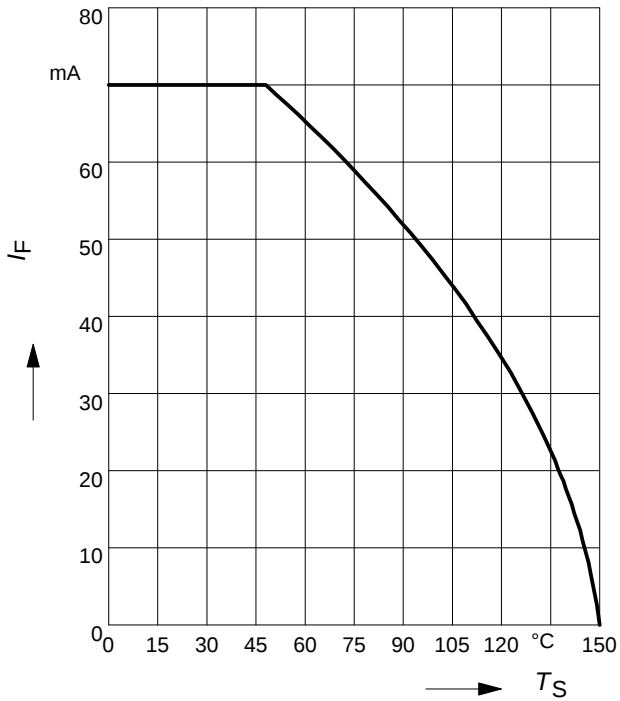
Forward current $I_F = f(T_S)$

BAS70



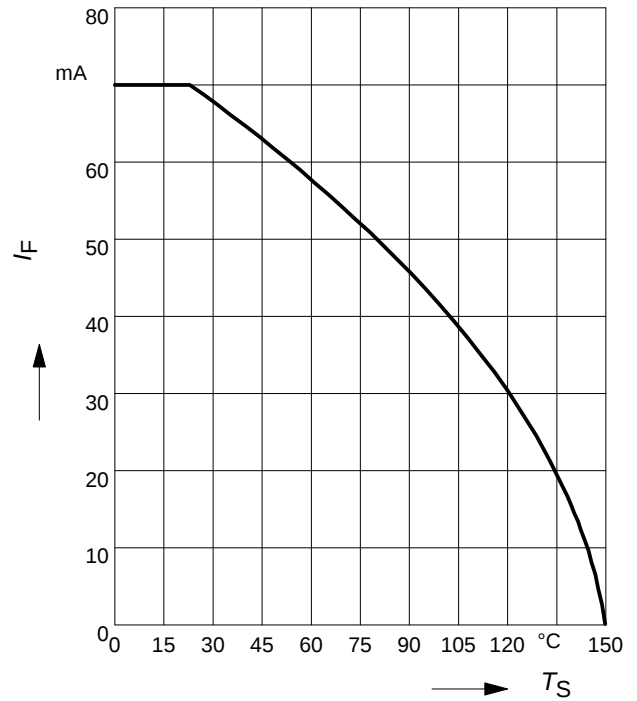
Forward current $I_F = f(T_S)$

BAS70-04, BAS70-06



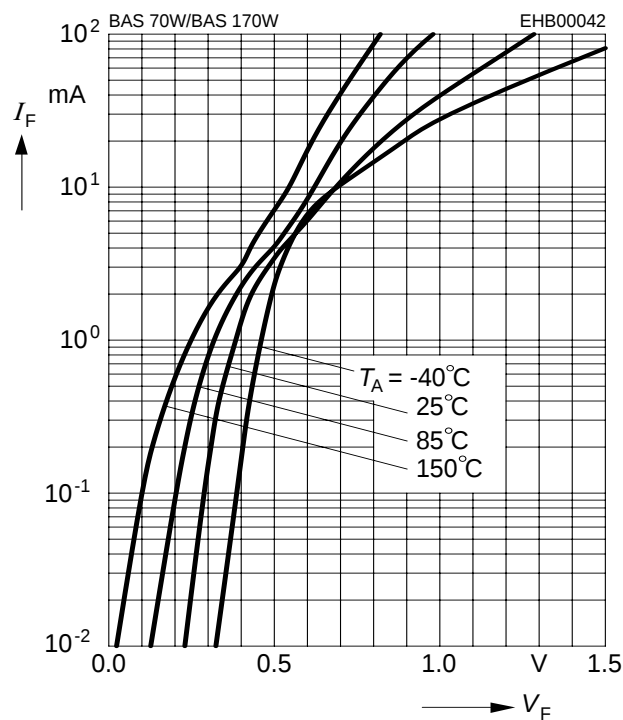
Forward current $I_F = f(T_S)$

BAS70-05



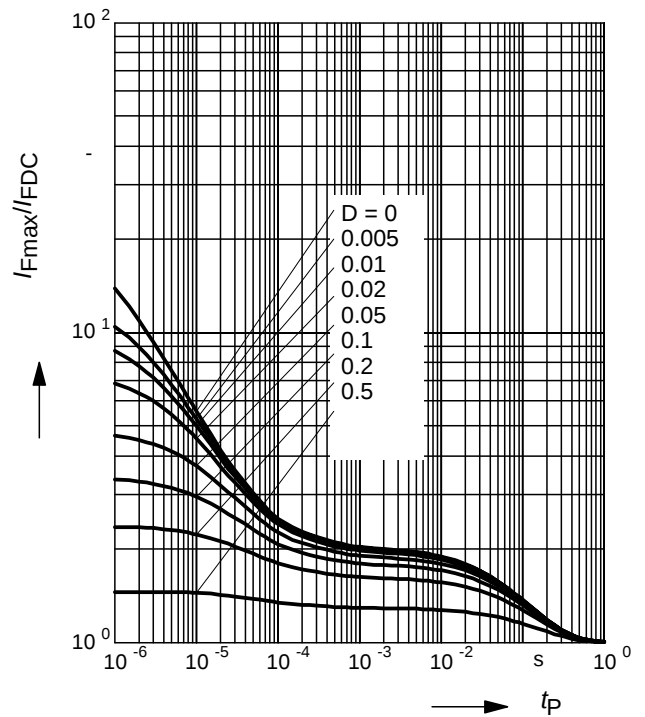
Forward current $I_F = f(V_F)$

$T_A = 25^\circ\text{C}$



Permissible Pulse Load

$I_{Fmax}/I_{FDC} = f(t_p)$



Permissible Puls Load $R_{thJS} = f(t_p)$

