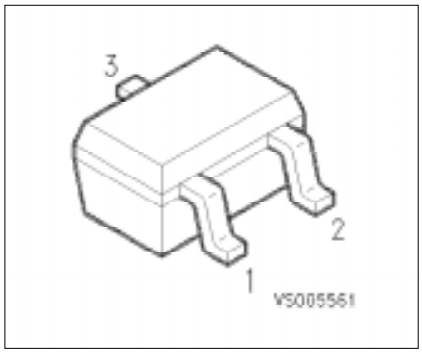
SIEMENS

Silicon Schottky Diode

BAS 70W

- General-purpose diodes for high-speed switching
- Circuit protection
- Voltage clamping
- High-level detection and mixing



Type	Ordering Code (tape and reel)	Pin Configuration 1	2	3	Marking	Package[1)]
BAS 70-04W	Q62702-A1068	A1	C2	C1/A2	74s	SOT-323
BAS 70-05W	Q62702-A1069	A1	A2	C1/C2	75s	
BAS 70-06W	Q62702-A1070	C1	C2	A1/A2	76s	

Maximum Ratings

Parameter	Symbol	Values	Unit
Reverse voltage	V_R	70	V
Forward current	I_F	70	mA
Surge forward current, $t \leq 10$ ms	I_{FSM}	100	mA
Total power dissipation $T_S \leq 91$ °C	P_{tot}	250	mW
Operating temperature range	T_{op}	– 55 … + 150	°C
Storage temperature range	T_{stg}	– 55 … + 150	°C

Thermal Resistance

Junction-ambient[1)]	$R_{th\ JA}$	≤ 455	K/W
Junction-soldering point	$R_{th\ JS}$	≤ 235	K/W

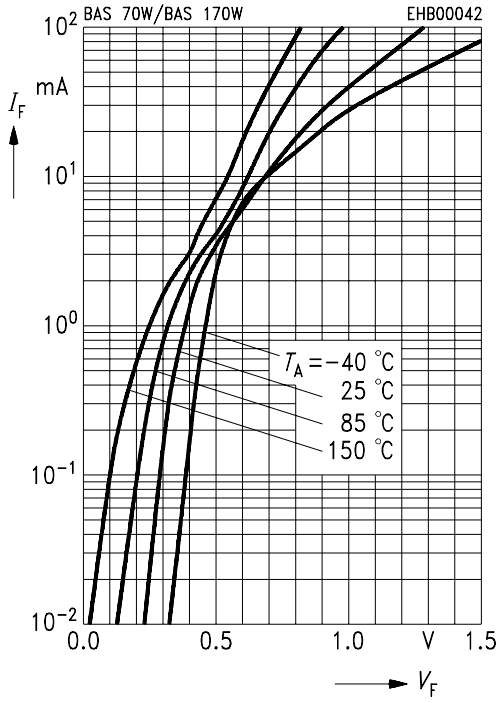
1) Package mounted on an epoxy pcb 40 mm x 40 mm x 1.5 mm/1cm^2 Cu.

Electrical Characteristics

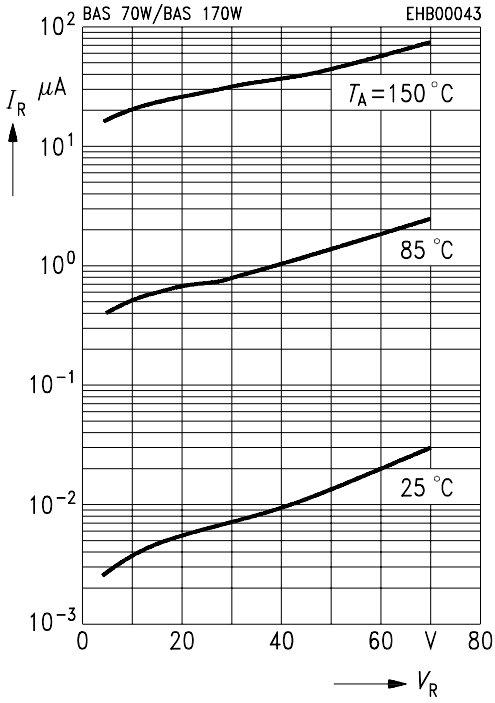
at T_A = 25 °C, unless otherwise specified.

Parameter	Symbol	Value			Unit
		min.	typ.	max.	
DC Characteristics					
Breakdown voltage $I_{(BR)}$ = 10 µA	$V_{(BR)}$	 70	 –	 –	V
Forward voltage I_F = 1 mA I_F = 10 mA I_F = 15 mA	V_F	 300 600 750	 375 705 880	 410 750 1000	mV
Reverse current V_R = 50 V V_R = 70 V	I_R	 – –	 – –	 0.1 10	µA
Diode capacitance V_R = 0 V, f = 1 MHz	C_T	 –	 1.5	 2	pF
Charge carrier life time I_F = 25 mA	τ	 –	 –	 100	ps
Differential forward resistance I_F = 10 mA, f = 10 kHz	r_f	 –	 34	 –	Ω
Series inductance	L_S	–	2	–	nH

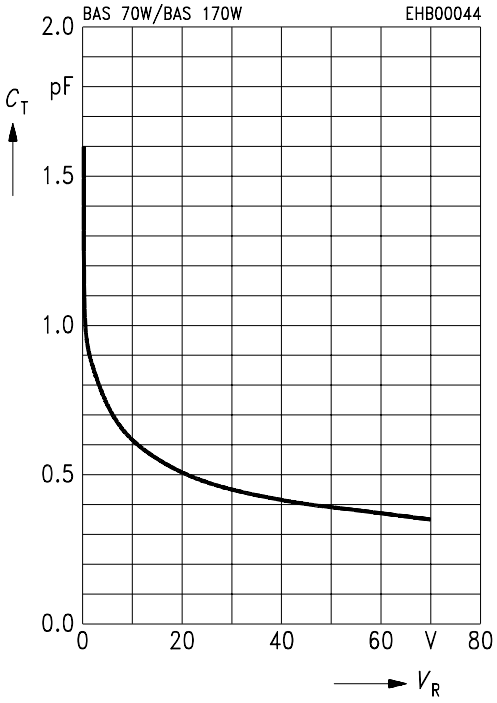
Forward current $I_F = f(V_F)$



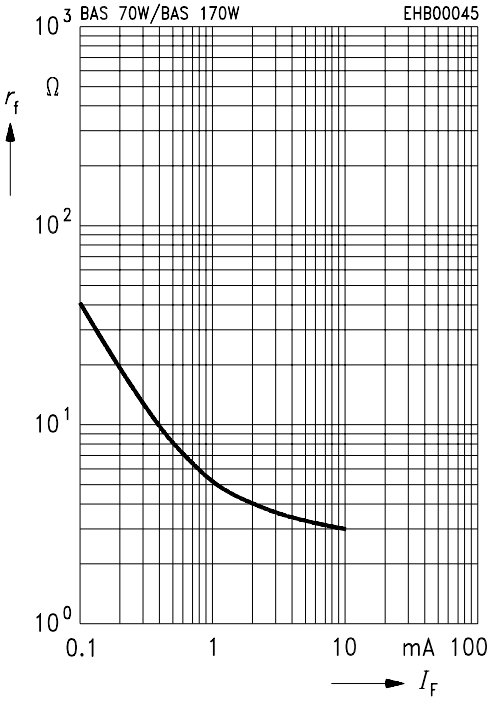
Reverse current $I_R = f(V_R)$



Diode capacitance $C_T = f(V_R)$

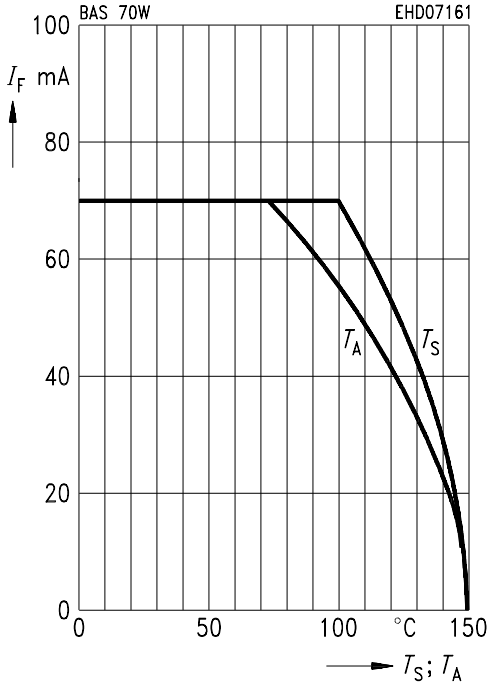


Differential forward resistance $R_F = f(I_F)$

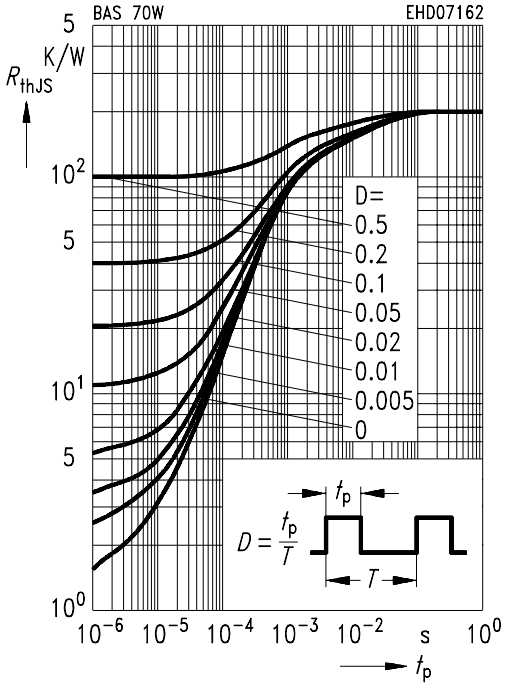


Permissible Pulse load $I_F = f(T_A; T_S^*)$

* Package mounted on epoxy



Permissible load $R_{thJS} = f(t_p)$



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