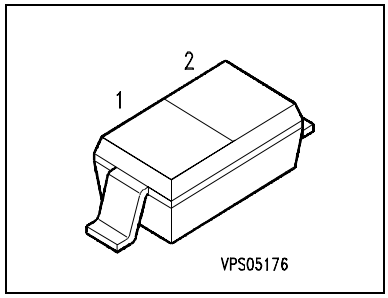
Silicon Schottky Diode

- General-purpose diodes for high-speed switching
- Circuit protection
- Voltage clamping
- High-level detecting and mixing
- Small package SOD-323



ESD: Electrostastic discharge sensitive device, observe handling precautions!

Type	Marking	Ordering Code (tape and reel)	Pin Configuration 1		2	Package 1)
BAS 170W	7	Q62702-A1072	A		C	SOD-323

Maximum Ratings

Parameter	Symbol	BAS 170W	Unit
Reverse voltage	V_R	70	V
Forward current	I_F	70	mA
Surge forward current, t ≤ 10 ms	I_{FSM}	100	mA
Total Power dissipation T_S ≤ 97°C	P_{tot}	250	mW
Operating temperature range	T_{op}	-55 +150°C	°C
Storage temperature range	T_{stg}	-55...+150°C	°C
Thermal Resistance			
Junction-ambient 1)	$R_{th\ JA}$	≤ 320	K/W
Junction-soldering point	$R_{th\ JS}$	≤ 210	K/W

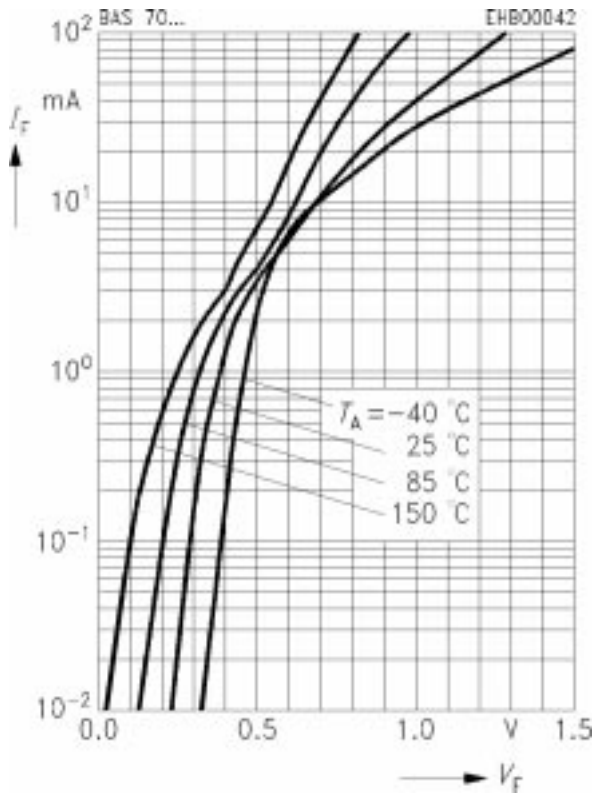
1) Package mounted on an epoxy pcb 40mm x 40mm x 1.5mm/1cm^2 Cu

Electrical Characteristics

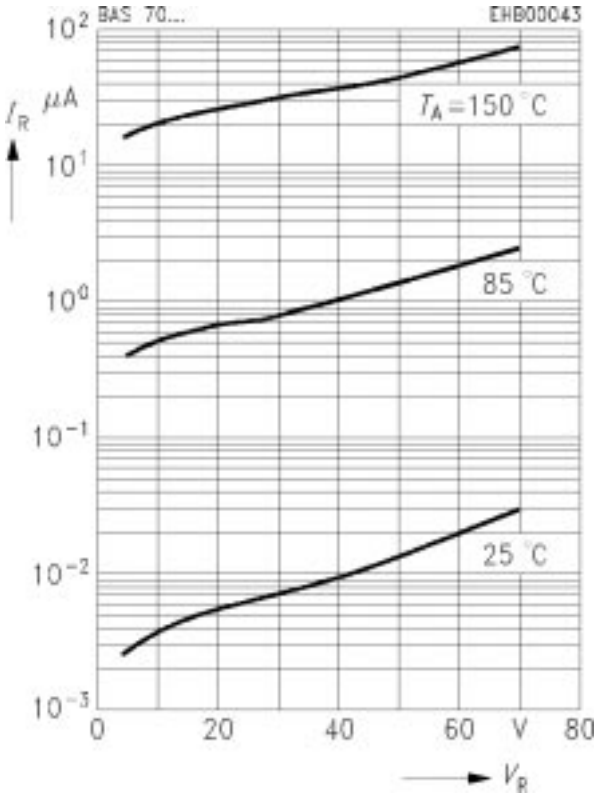
at T_A = 25 °C, unless otherwise specified.

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	I	-	-	100	ps
Differential forward resistance I_F = 10 mA, f = 10 kHz	R_F	-	34	-	Ω
Series inductance	L_S	-	2	-	nH

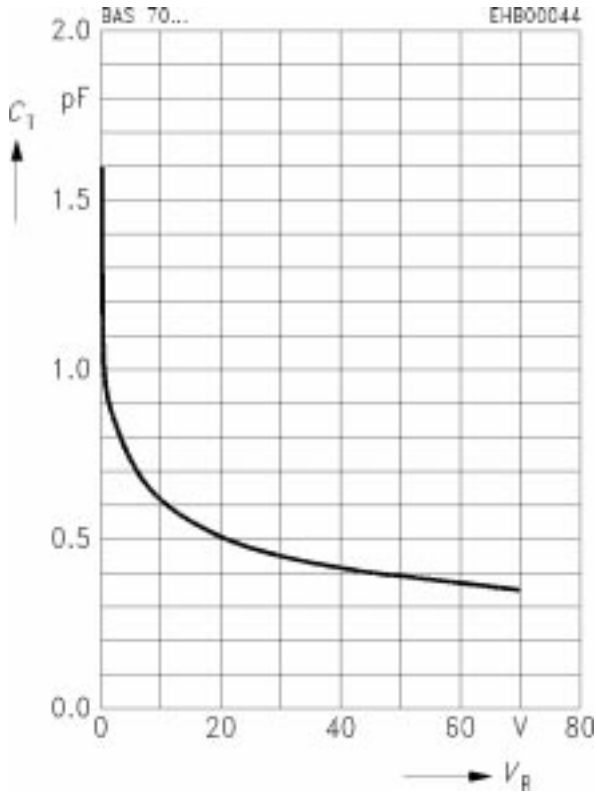
Forward current $I_F = f(V_F)$



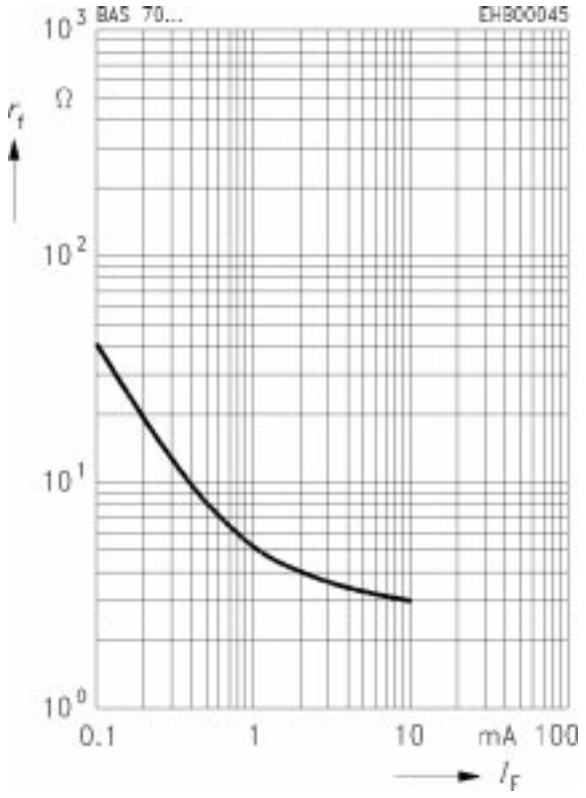
Reverse current $I_R = f(V_R)$



Diode capacitance $C_T = f(V_R)$

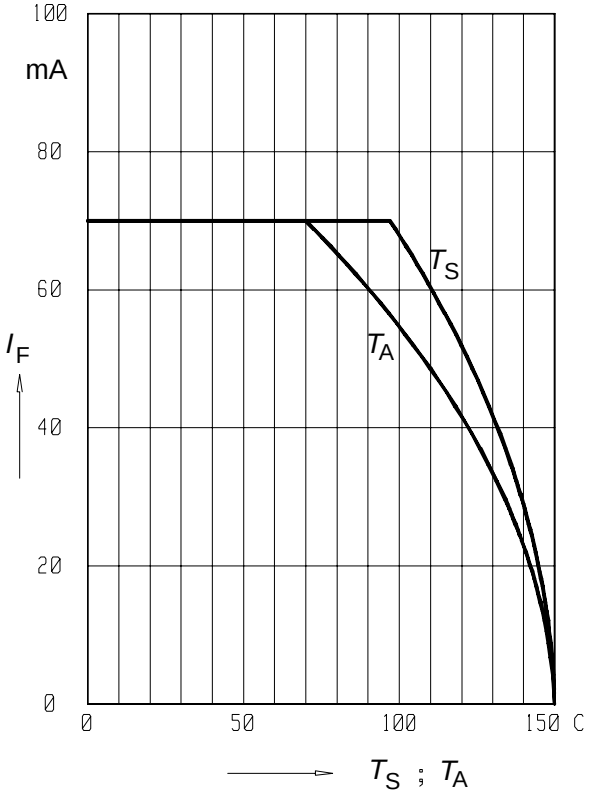


Differential forward resistance $R_F = f(I_F)$

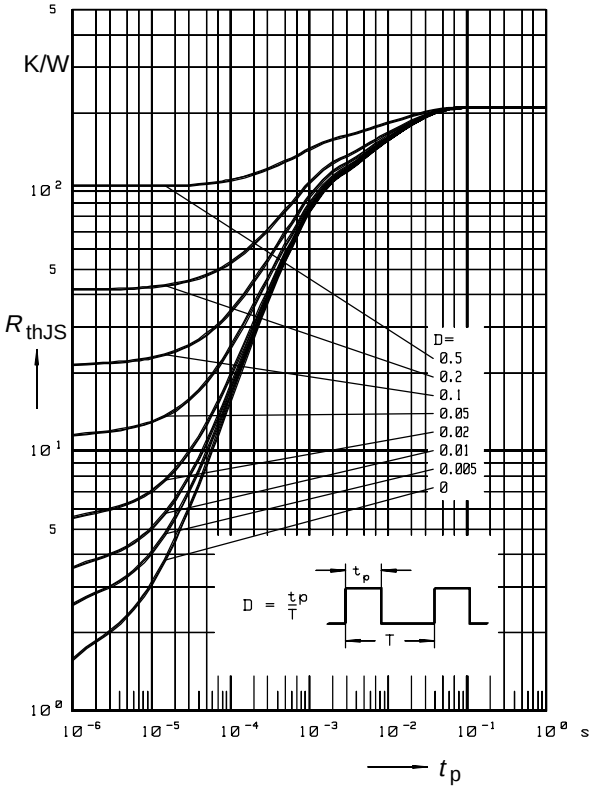


Forward current $I_F = f(T_A * T_S)$

* Package mounted on epoxy



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



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