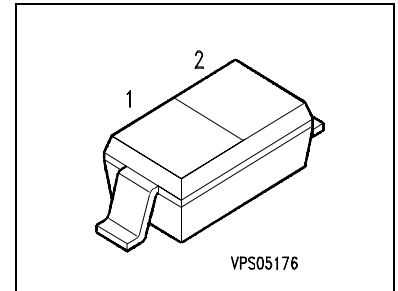


Silicon Schottky Diode

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



ESD: Electrostatic discharge sensitive device, observe handling precautions!

Type	Marking	Ordering Code (tape and reel)	Pin Configuration			Package ¹⁾
			1		2	
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, $t \leq 10$ ms	I_{FSM}	100	mA
Total Power dissipation $T_S \leq 97^\circ\text{C}$	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

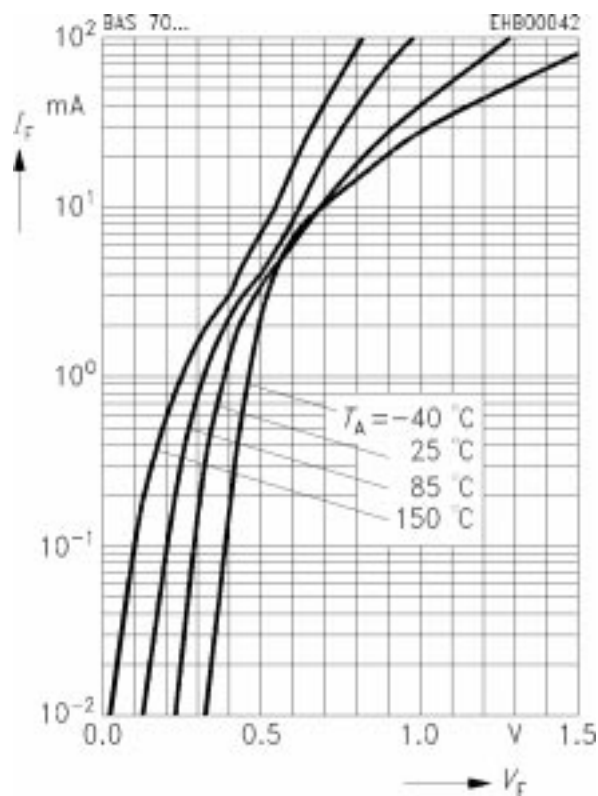
¹⁾ Package mounted on an epoxy pcb 40mm x 40mm x 1.5mm/1cm² Cu

Electrical Characteristics

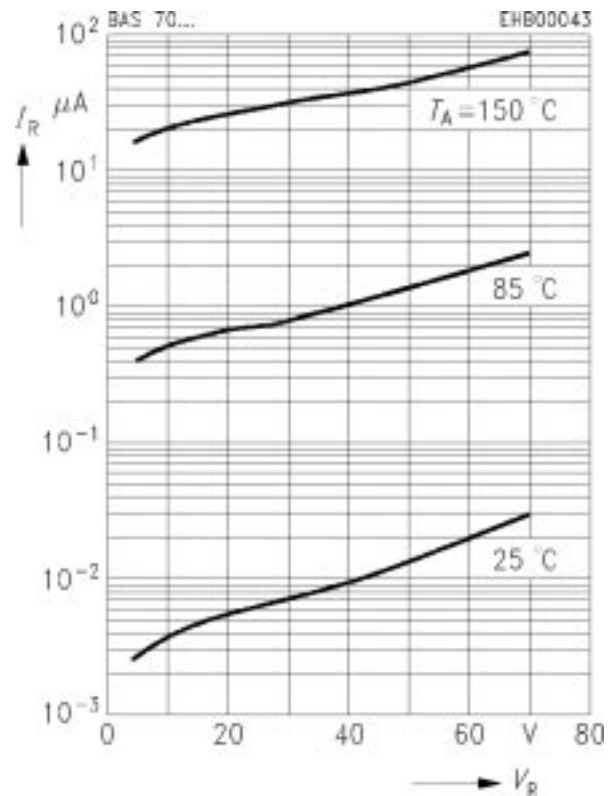
 at $T_A = 25\text{ °C}$, unless otherwise specified.

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

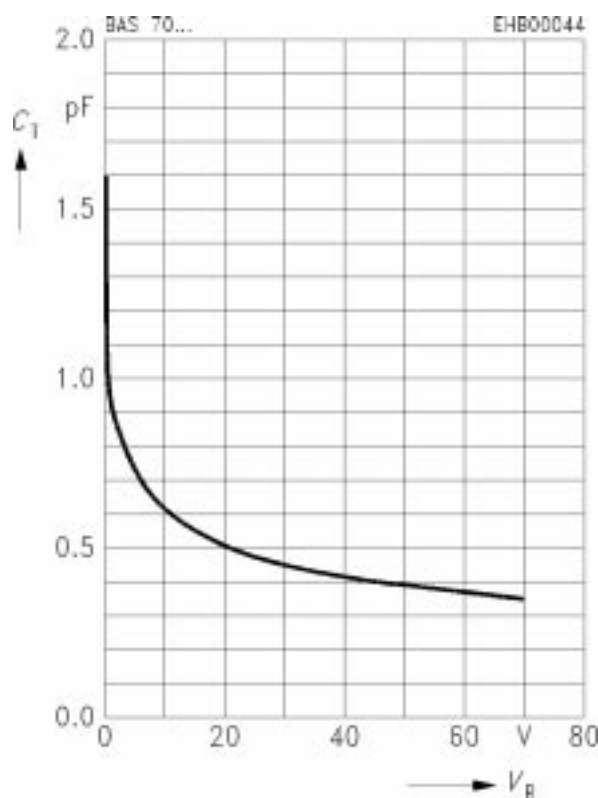
Forward current $I_F = f(V_F)$



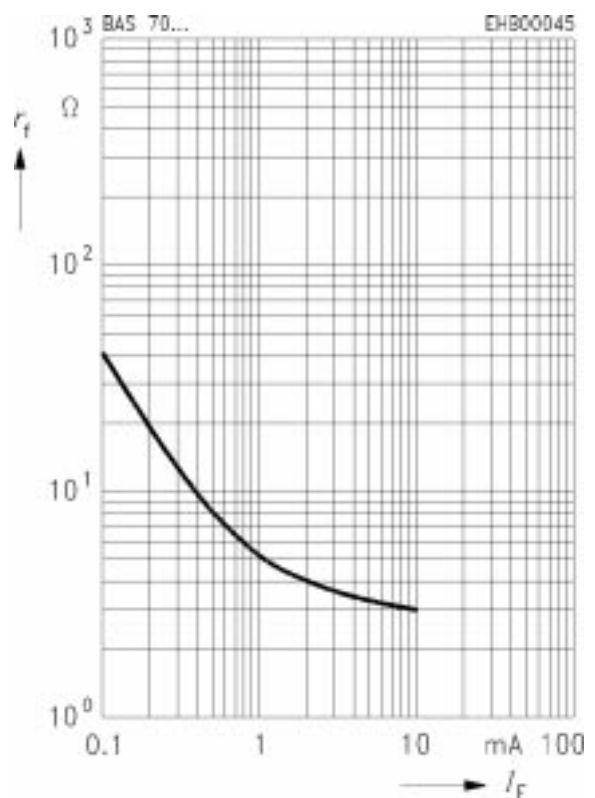
Reverse current $I_R = f(V_R)$



Diode capacitance $C_T = f(V_R)$

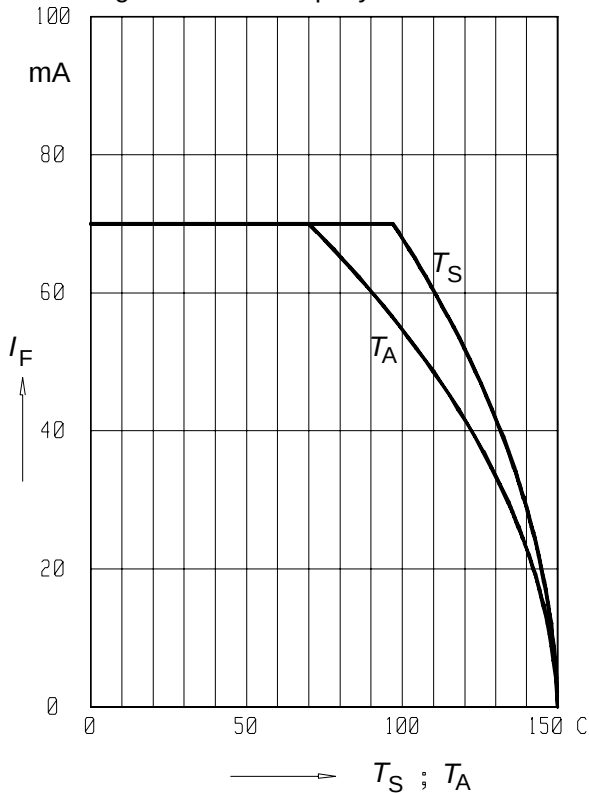


Differential forward resistance $R_F = f(I_F)$

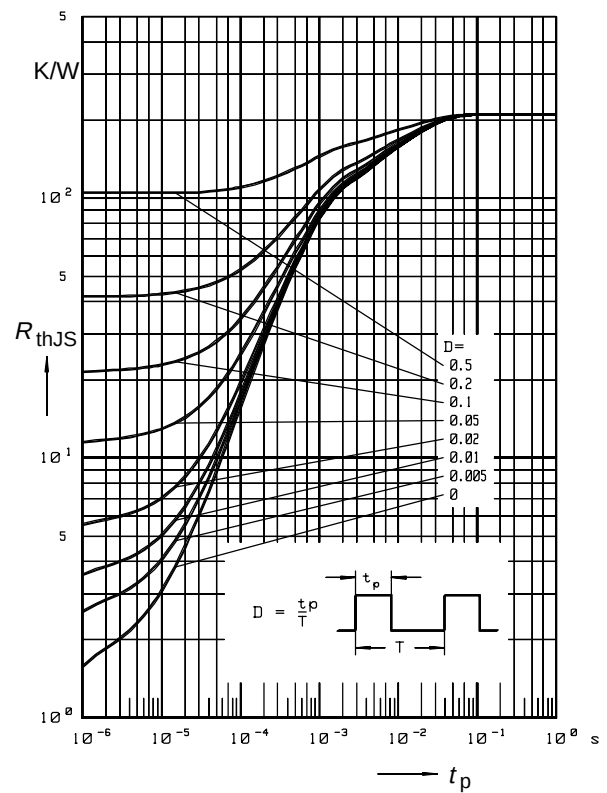


Forward current $I_F = f(T_A, T_S)$

* Package mounted on epoxy



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



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

