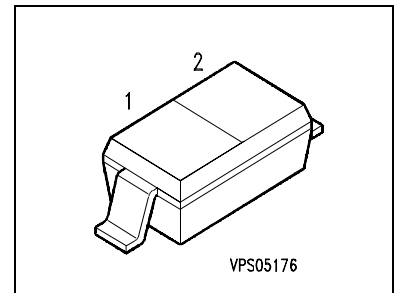


## Silicon Schottky Diode

- 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 <sup>1)</sup>
			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

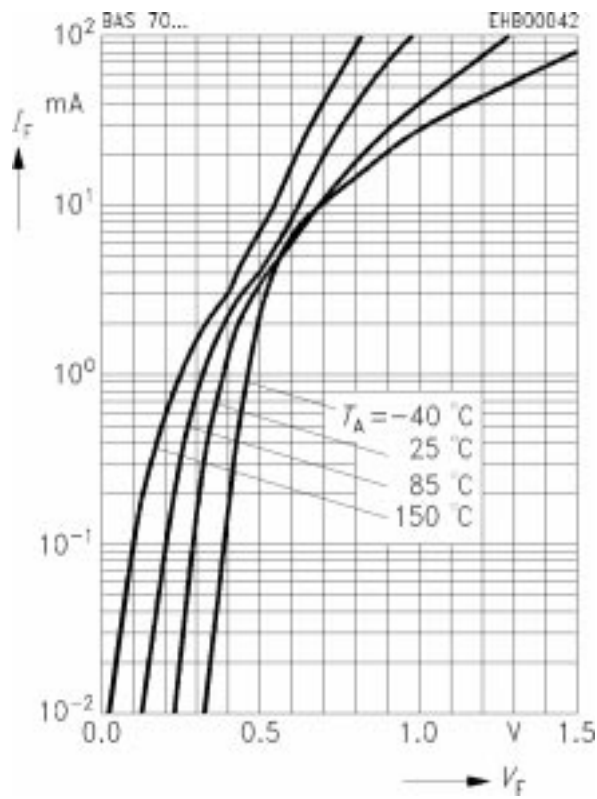
Junction-ambient <sup>1)</sup>	$R_{th JA}$	$\leq 320$	K/W
Junction-soldering point	$R_{th JS}$	$\leq 210$	K/W

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

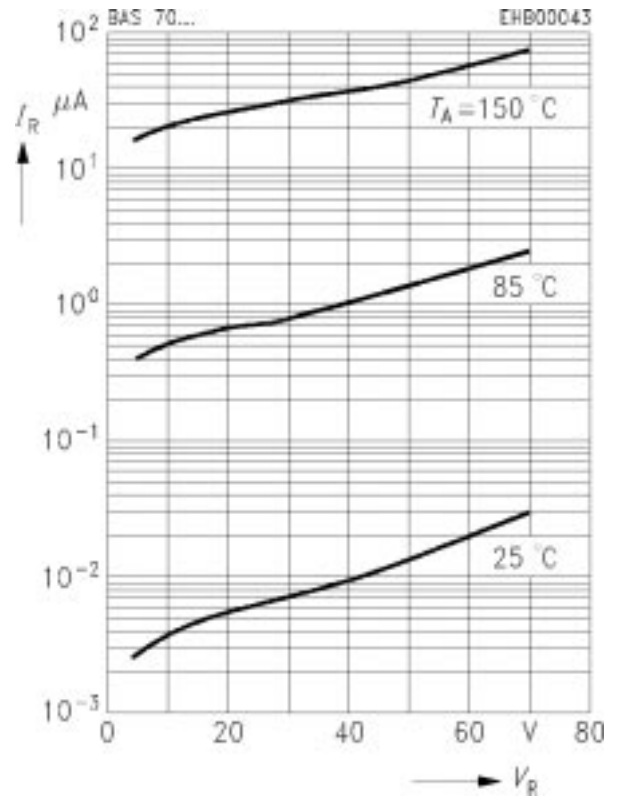
**Electrical Characteristics**at  $T_A = 25\text{ °C}$ , unless otherwise specified.

Parameter	Symbol	Value			Unit
		min.	typ.	max.	
<b>DC Characteristics</b>					
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	$\mu\text{A}$
Diode capacitance $V_R = 0\text{ V}$ , $f = 1\text{ MHz}$	$C_T$	-	1.5	2	pF
Charge carrier life time $I_F = 25\text{ mA}$	$t$	-	-	100	ps
Differential forward resistance $I_F = 10\text{ mA}$ , $f = 10\text{ kHz}$	$R_F$	-	34	-	$\Omega$
Series inductance	$L_S$	-	2	-	nH

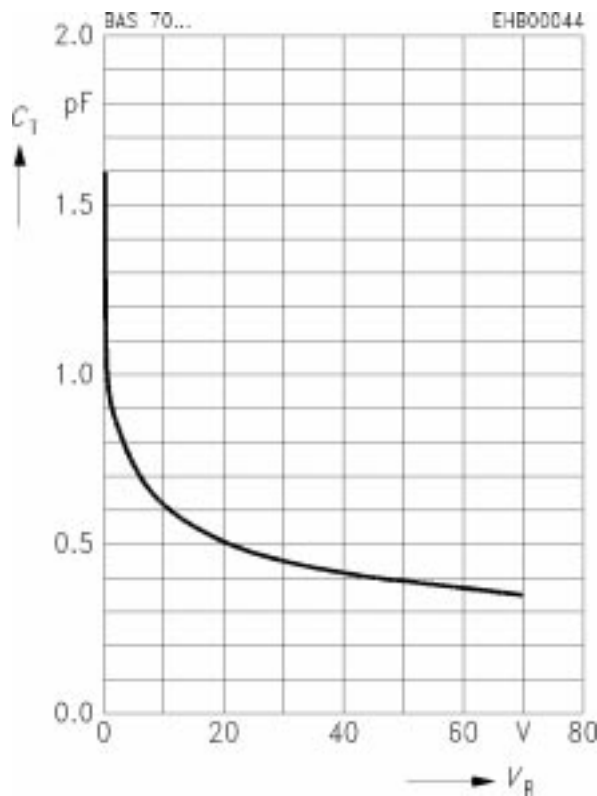
Forward current  $I_F = f(V_F)$



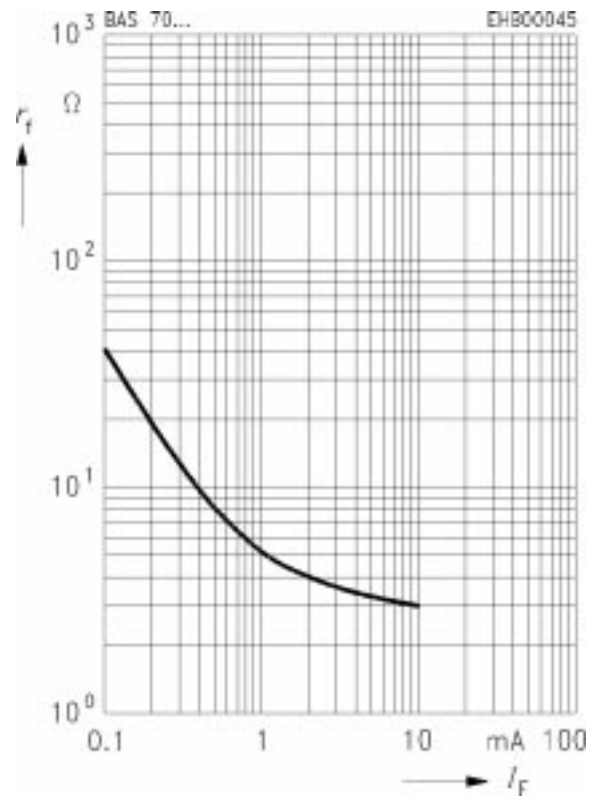
Reverse current  $I_R = f(V_R)$



Diode capacitance  $C_T = f(V_R)$

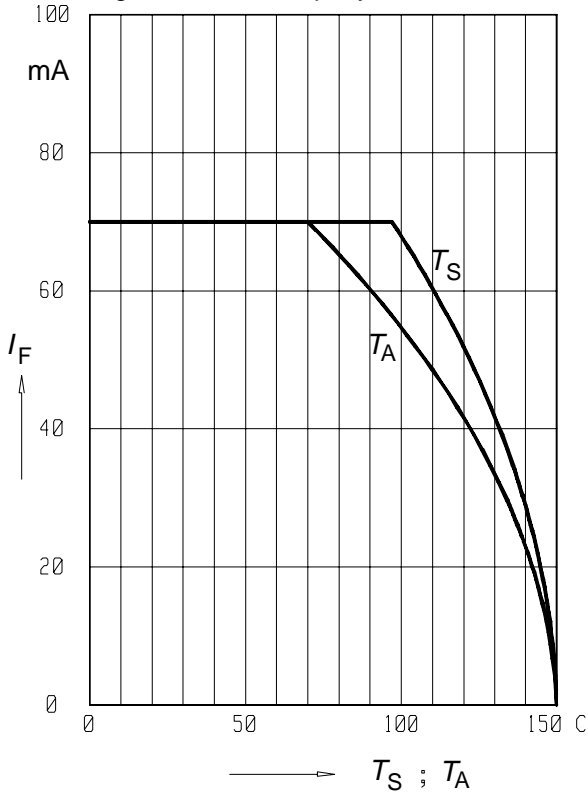


Differential forward resistance  $R_F = f(I_F)$

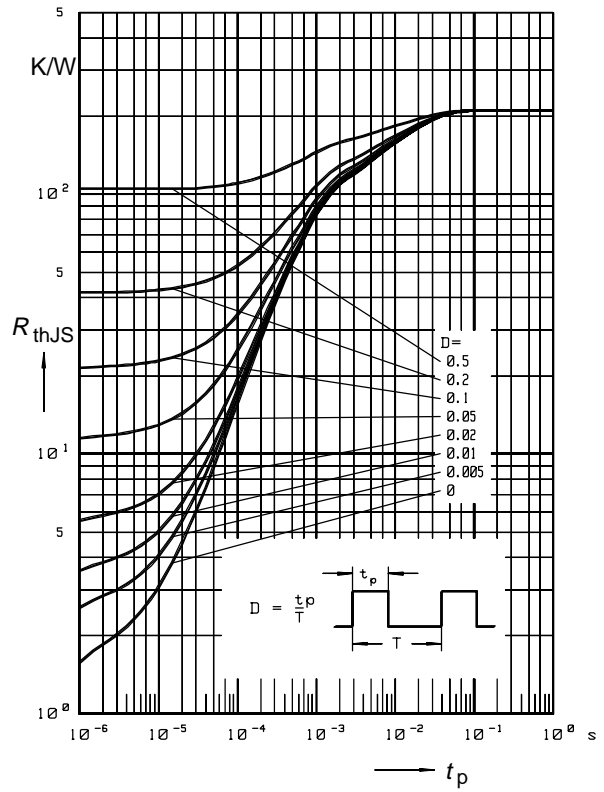


**Forward current  $I_F = f(T_A * T_S)$**

\* Package mounted on epoxy



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



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

