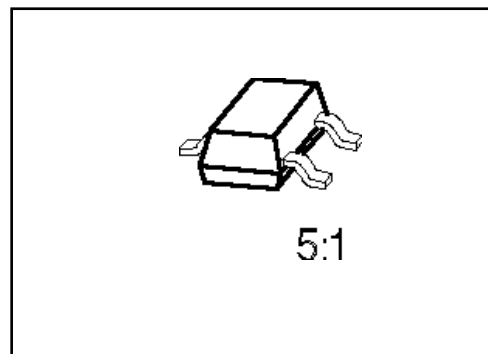



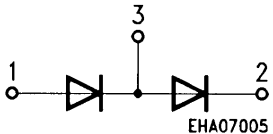
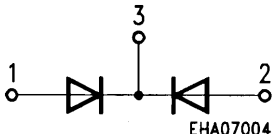
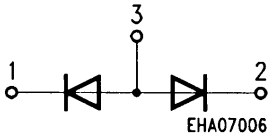
## Silicon Schottky Diodes

BAS 70 ...

- General-purpose diodes for high-speed switching
- Circuit protection
- Voltage clamping
- High-level detecting and mixing
- Available with CECC quality assessment



**ESD:** Electrostatic discharge sensitive device, observe handling precautions!

Type	Marking	Ordering Code (tape and reel)	Pin Configuration	Package <sup>1)</sup>
● BAS 70	73s	Q62702-A118		SOT-23
● BAS 70-04	74s	Q62702-A730		
● BAS 70-05	75s	Q62702-A711		
● BAS 70-06	76s	Q62702-A774		

<sup>1)</sup> For detailed information see chapter Package Outlines.

**ESD:** Electrostatic discharge sensitive device, observe handling precautions!

Type	Marking	Ordering Code (tape and reel)	Pin Configuration	Package <sup>1)</sup>
● BAS 70-07	77s	Q62702-A846		SOT-143

### Maximum Ratings per Diode

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	
Total power dissipation BAS 70 $T_s \leq 66$ °C <sup>2)</sup> BAS 70-04 ... $T_s \leq 40$ °C <sup>2)</sup>	$P_{tot}$	250	mW
Junction temperature	$T_j$	150	°C
Operating temperature range	$T_{op}$	- 55 ... + 150	
Storage temperature range	$T_{stg}$	- 55 ... + 150	

### Thermal Resistance

Junction - ambient <sup>3)</sup> BAS 70 BAS 70-04 ...	$R_{th JA}$	$\leq 405$ $\leq 575$	K/W
Junction - soldering point BAS 70 BAS 70-04 ...	$R_{th JS}$	$\leq 335$ $\leq 435$	

1) For detailed information see chapter Package Outlines.

2) Max. 450 mW per package.

3) Package mounted on epoxy pcb 40 mm × 40 mm × 1.5 mm/6 cm<sup>2</sup> Cu.

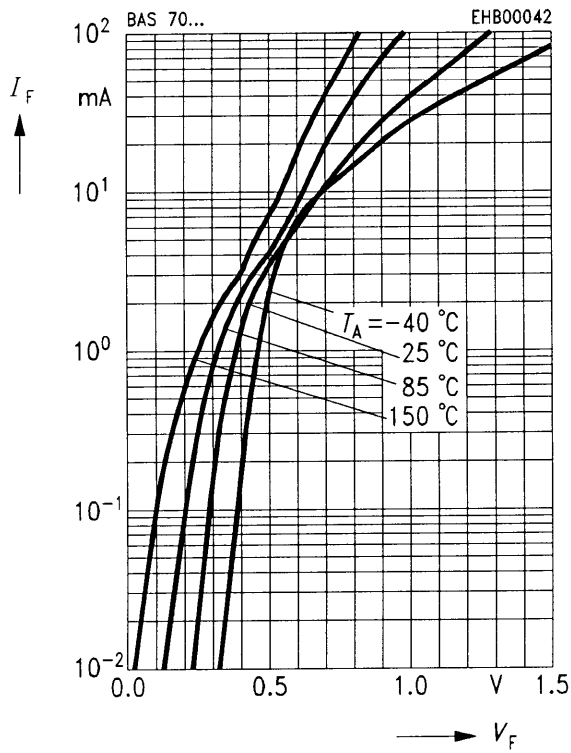
## Electrical Characteristics per Diode

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

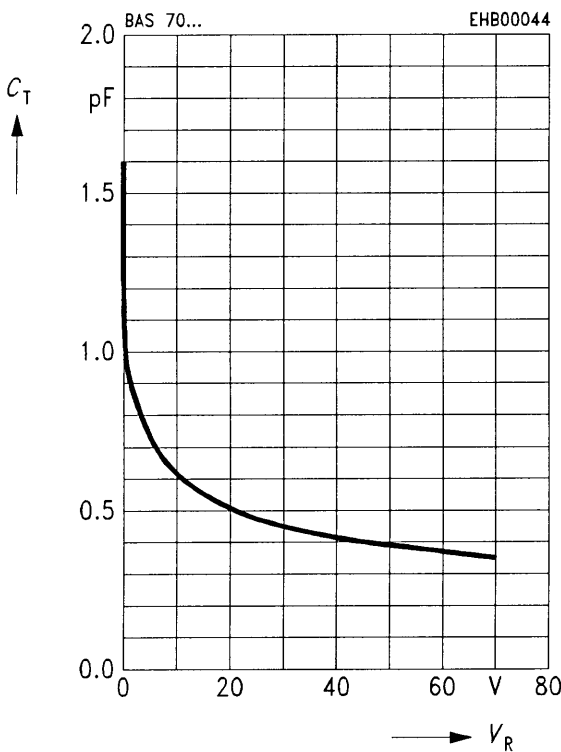
Parameter	Symbol	Values			Unit
		min.	typ.	max.	
<b>DC characteristics</b>					
Breakdown voltage $I_R = 10\text{ }\mu\text{A}$	$V_{(BR)}$	70	–	–	V
Reverse current $V_R = 50\text{ V}$ $V_R = 70\text{ V}$	$I_R$	– –	– –	0.1 10	$\mu\text{A}$
Forward voltage $I_F = 1\text{ mA}$ $I_F = 10\text{ mA}$ $I_F = 15\text{ mA}$	$V_F$	– – –	380 690 780	410 750 1000	mV
Diode capacitance $V_R = 0, f = 1\text{ MHz}$	$C_T$	–	1.6	2	pF
Charge carrier life time $I_F = 25\text{ mA}$	$\tau$	–	–	100	ps
Differential forward resistance $I_F = 10\text{ mA}, f = 10\text{ kHz}$	$r_f$	–	30	–	$\Omega$

**Characteristics per Diode** at  $T_j = 25\text{ °C}$ , unless otherwise specified.

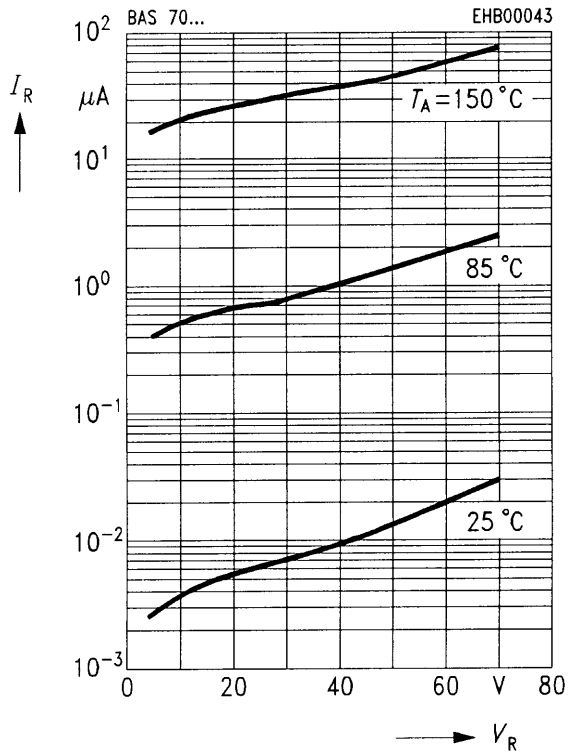
**Forward current**  $I_F = f(V_F)$



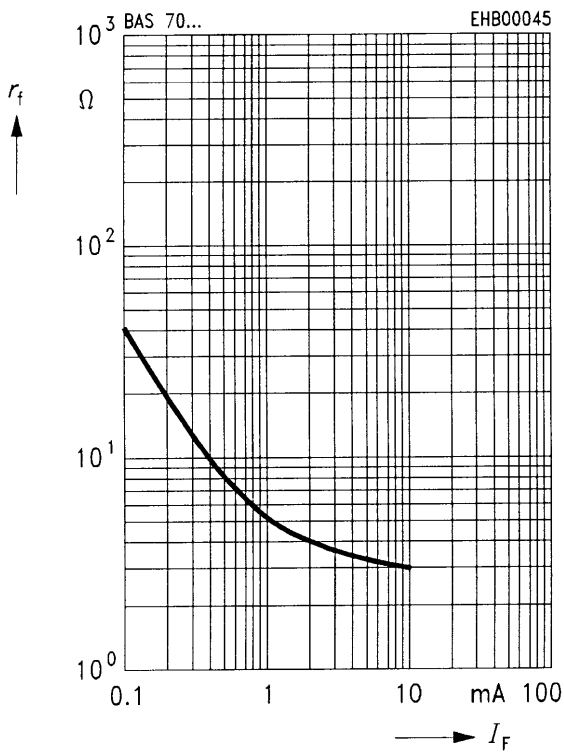
**Diode capacitance  $C_T = f(V_R)$**   
 $f = 1 \text{ MHz}$



Reverse current  $I_R = f(V_R)$



Differential forward resistance  $r_f = f(I_F)$   
 $f = 10 \text{ kHz}$



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

\* Package mounted on epoxy

