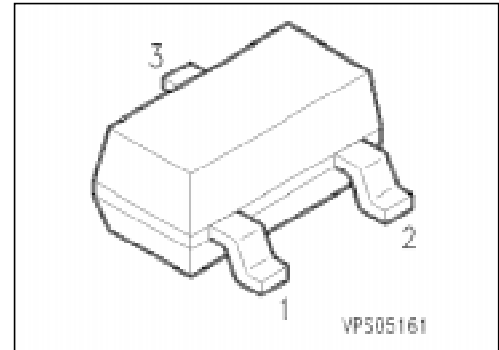
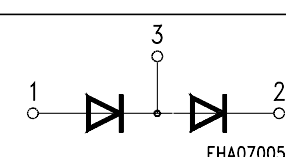
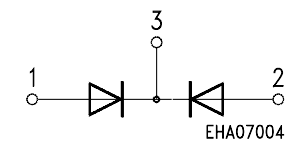
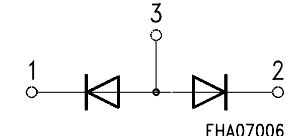


## Silicon PIN Diodes

**BAR 14-1**  
**... BAR 16-1**

- RF switch
- RF attenuator for frequencies above 10 MHz
- Low distortion factor
- Long-term stability of electrical characteristics



Type	Marking	Ordering Code (tape and reel)	Pin Configuration	Package <sup>1)</sup>
BAR 14-1	L7	Q62702-A772		SOT-23
BAR 15-1	L8	Q62702-A731		
BAR 16-1	L9	Q62702-A773		

### Maximum Ratings per Diode

Parameter	Symbol	Values	Unit
Reverse voltage	$V_R$	100	V
Forward current	$I_F$	140	mA
Total power dissipation, $T_s \leq 65^\circ\text{C}^2)$	$P_{\text{tot}}$	250	mW
Junction temperature	$T_j$	150	°C
Storage temperature range	$T_{\text{stg}}$	- 55 ... + 150	
Operating temperature range	$T_{\text{op}}$	- 55 ... + 150	

### Thermal Resistance

Junction - ambient <sup>2)</sup>	$R_{\text{th JA}}$	$\leq 500$	K/W
Junction - soldering point	$R_{\text{th JS}}$	$\leq 340$	

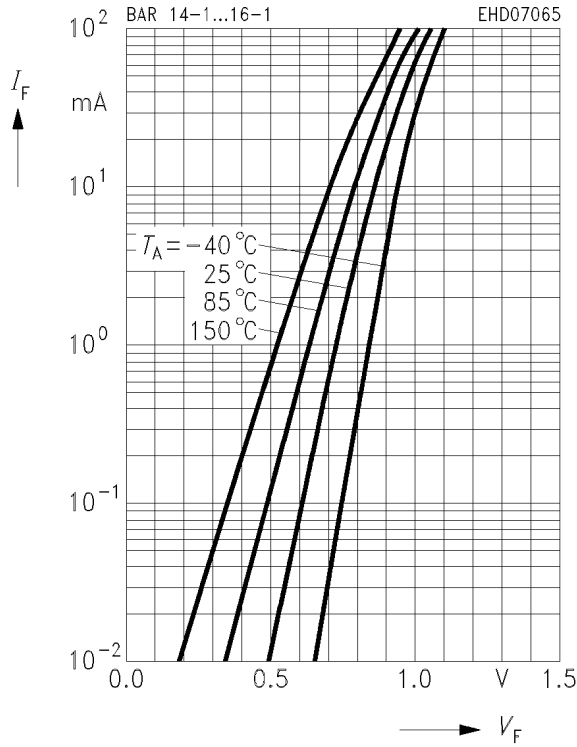
<sup>1)</sup> For detailed information see chapter Package Outlines.

<sup>2)</sup> Package mounted on alumina 15 mm × 16.7 mm × 0.7 mm.

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

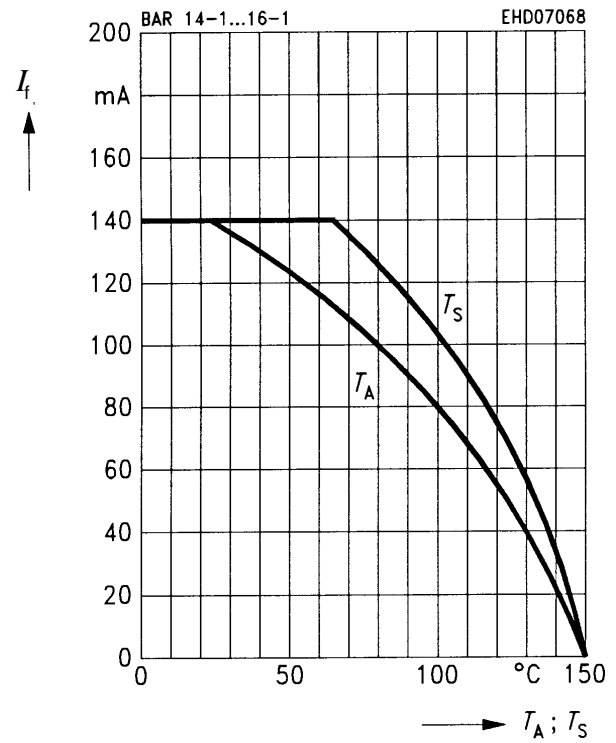
Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Reverse current $V_R = 50\text{ V}$ $V_R = 100\text{ V}$	$I_R$	– –	– –	100 1	nA $\mu\text{A}$
Forward voltage $I_F = 100\text{ mA}$	$V_F$	–	1.05		V
Diode capacitance $V_R = 50\text{ V}, f = 1\text{ MHz}$ $V_R = 0, f = 100\text{ MHz}$	$C_T$	– –	0.25 0.2	0.5 –	pF
Forward resistance $f = 100\text{ MHz}, I_F = 0.01\text{ mA}$ $I_F = 0.10\text{ mA}$ $I_F = 1\text{ mA}$ $I_F = 10\text{ mA}$	$r_f$	– – – –	2800 380 45 7	– – – –	$\Omega$
Zero bias conductance $V_R = 0, f = 100\text{ MHz}$	$g_p$	–	50	–	$\mu\text{S}$
Charge carrier life time $I_F = 10\text{ mA}, I_R = 6\text{ mA}$	$\tau_L$	0.7	1	–	$\mu\text{S}$

Forward current  $I_F = f(V_F)$



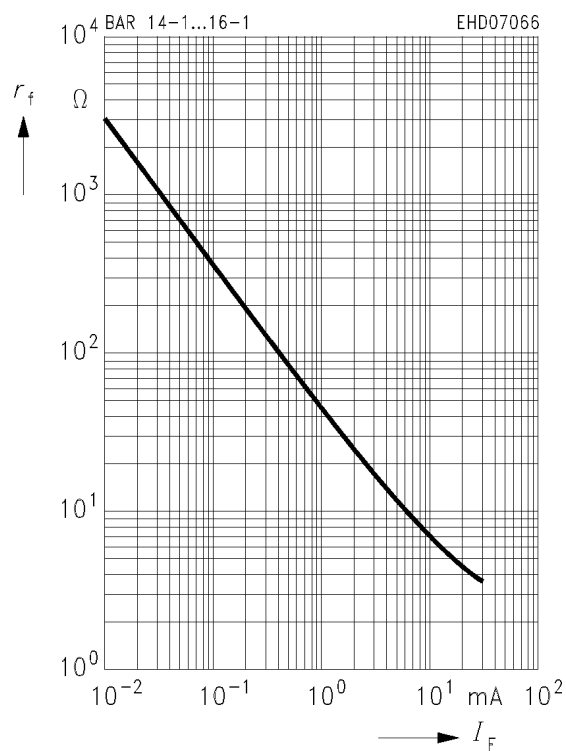
Forward current  $I_F = f(T_S; T_A^*)$

\*Package mounted on alumina



Forward resistance  $r_f = f(I_F)$

$f = 100$  MHz



Diode capacitance  $C_T = f(V_R)$

