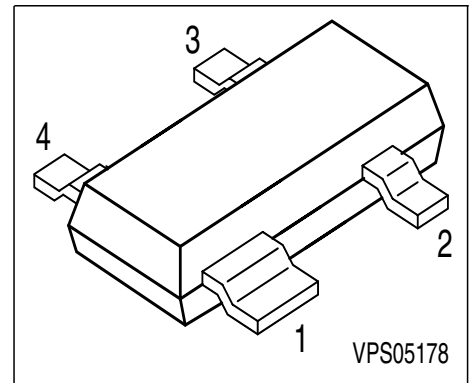
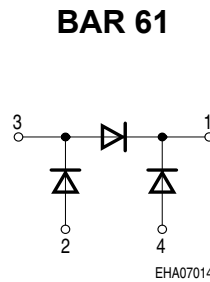
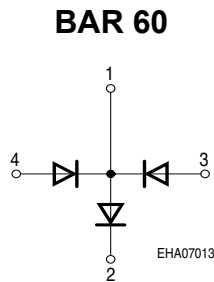


**Silicon PIN Diodes**

- RF switch, RF attenuator for frequencies above 10 MHz



Type	Marking	Pin Configuration				Package
BAR 60	60s	1=C1/A2/C3	2 = C2	3 = A3	4 = A1	SOT-143
BAR 61	61s	1=C2/C3	2 = A1	3=A2/C1	4 = A3	SOT-143

**Maximum Ratings**

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

**Thermal Resistance**

Junction - ambient <sup>1)</sup>	$R_{thJA}$	$\leq 580$	K/W
Junction - soldering point	$R_{thJS}$	$\leq 340$	

1) Package mounted on alumina 15mm x 16.7mm x 0.7mm

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

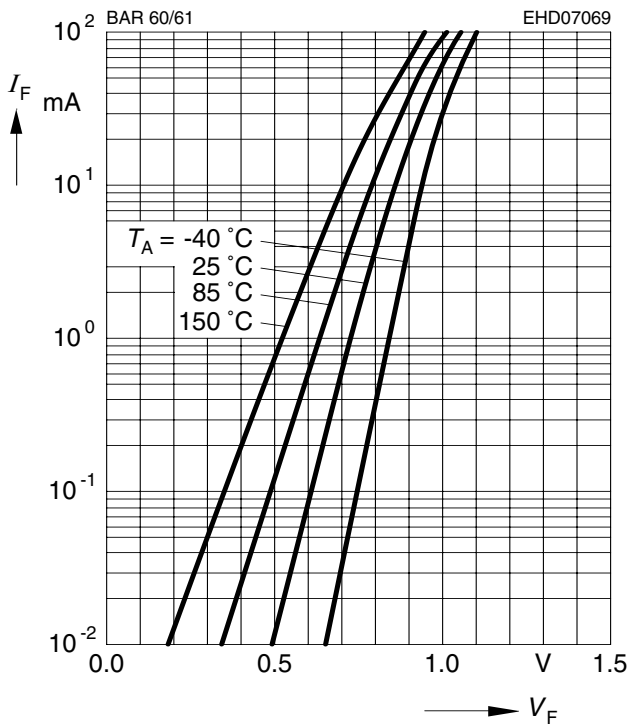
Parameter	Symbol	Values			Unit
		min.	typ.	max.	
<b>DC characteristics</b>					
Reverse current $V_R = 50\text{ V}$	$I_R$	-	-	100	nA
Reverse current $V_R = 100\text{ V}$	$I_R$	-	-	1	$\mu\text{A}$
Forward voltage $I_F = 100\text{ mA}$	$V_F$	-	-	1.25	V

**AC characteristics**

Diode capacitance $V_R = 0\text{ V}, f = 100\text{ MHz}$ $V_R = 50\text{ V}, f = 1\text{ MHz}$	$C_T$	- -	0.2 0.25	- 0.5	pF
Forward resistance $I_F = 0.01\text{ mA}, f = 100\text{ MHz}$ $I_F = 0.1\text{ mA}, f = 100\text{ MHz}$ $I_F = 1\text{ mA}, f = 100\text{ MHz}$ $I_F = 10\text{ mA}, f = 100\text{ MHz}$	$r_f$	- - - -	2800 380 45 7	- - - -	$\Omega$
Zero bias conductance $V_R = 0\text{ V}, f = 100\text{ MHz}$	$g_p$	-	50	-	$\mu\text{S}$
Charge carrier life time $I_F = 10\text{ mA}, I_R = 6\text{ mA}, I_R = 3\text{ mA}$	$\tau_{rr}$	-	1	-	$\mu\text{s}$

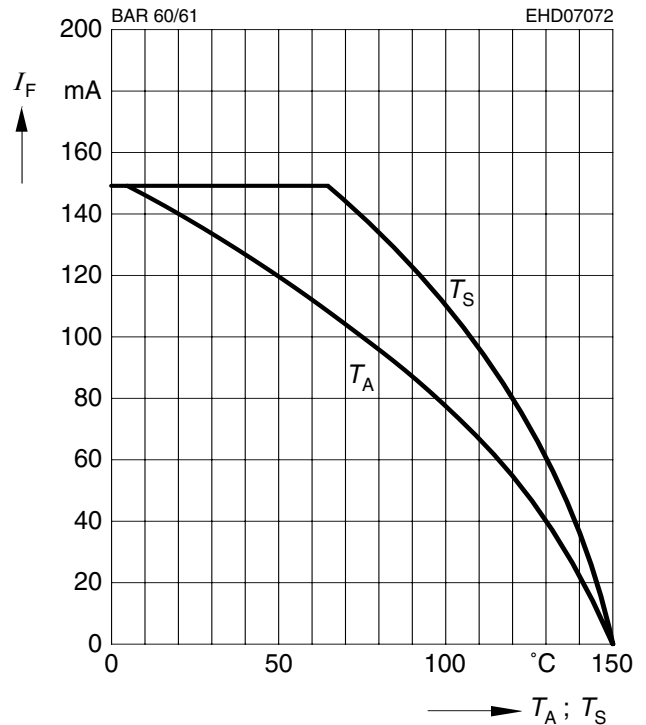
**Forward current  $I_F = f(V_F)$**

$T_A = 25^\circ\text{C}$



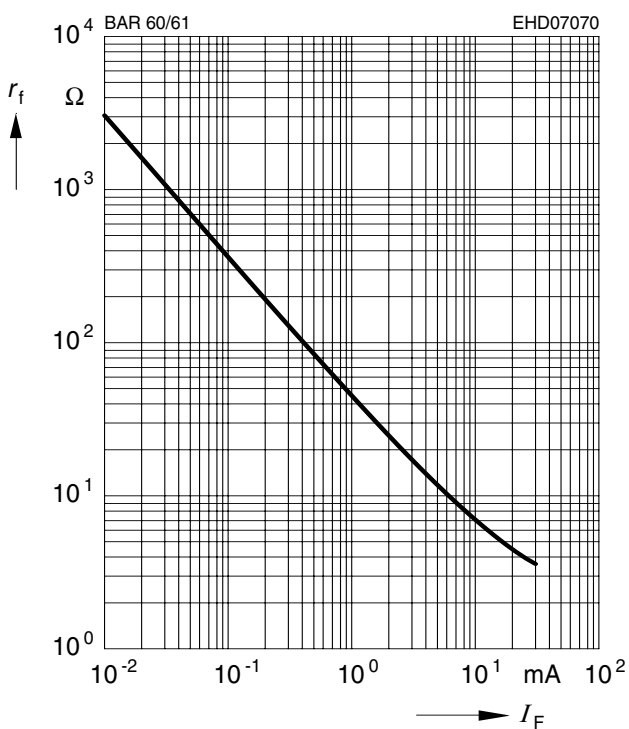
**Forward current  $I_F = f(T_A^*; T_S)$**

\* Package mounted on alumina



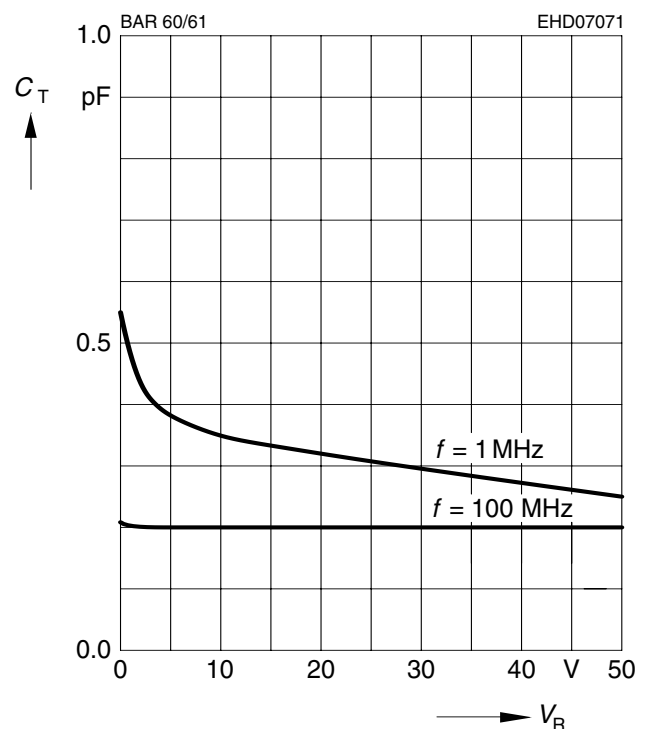
**Forward resistance  $r_f = f(I_F)$**

$f = 100\text{MHz}$

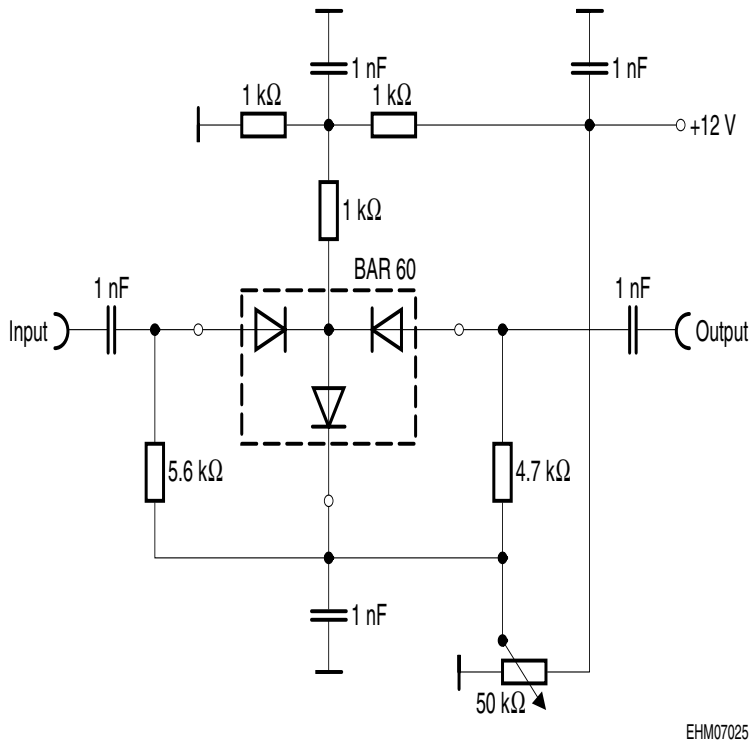


**Diode capacitance  $C_T = f(V_R)$**

$f = \text{Parameter}$



**Application circuit for attenuation networks with diode BAR60**



**Application circuit for attenuation networks with diode BAR61**

