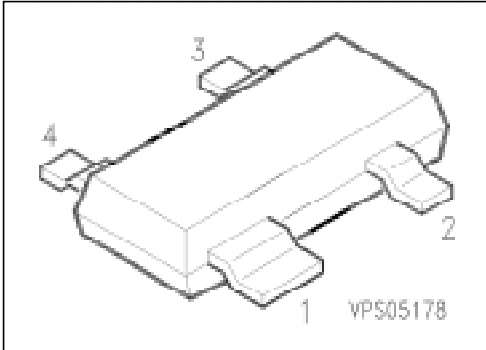


Silicon PIN Diodes

BAR 60
BAR 61

- RF switch
- RF attenuator for frequencies above 10 MHz



Type	Marking	Ordering Code (tape and reel)	Pin Configuration	Package ¹⁾
BAR 60	60	Q62702-A786	EHA07013	SOT-143
BAR 61	61	Q62702-A120	EHA07014	

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_{tot}	250	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	- 55 ... + 150	
Operating temperature range	T_{op}	- 55 ... + 150	

Thermal Resistance

Junction - ambient ²⁾	$R_{\text{th JA}}$	≤ 580	K/W
Junction - soldering point	$R_{\text{th JS}}$	≤ 340	

¹⁾ For detailed information see chapter Package Outlines.

²⁾ Package mounted on alumina 15 mm × 16.7 mm × 0.7 mm.

Electrical Characteristics per Diode

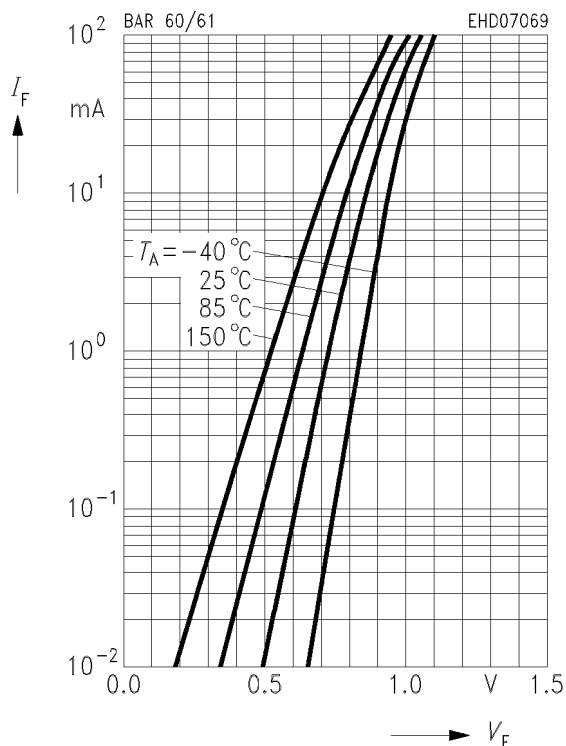
at $T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise specified.

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

DC/AC Characteristics

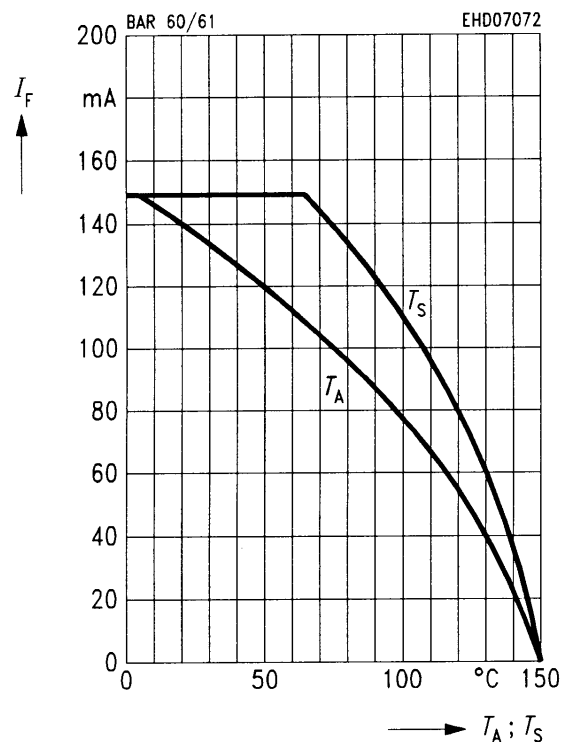
Reverse current $V_R = 50\text{ V}$ $V_R = 100\text{ V}$	I_R	— —	— —	100 1	nA μA
Forward voltage $I_F = 100\text{ mA}$	V_F	—	—	1.25	V
Diode capacitance $V_R = 50\text{ V}, f = 1\text{ MHz}$ $V_R = 0, f = 100\text{ MHz}$	C_T	— —	0.25 0.2	0.5 —	pF
Zero bias conductance $V_R = 0, f = 100\text{ MHz}$	g_p	—	50	—	μS
Charge carrier life time $I_F = 10\text{ mA}, I_R = 6\text{ mA}$	τ_L	—	1	—	μS
Differential forward resistance $f = 100\text{ MHz}, I_F = 0.01\text{ mA}$ $I_F = 0.1\text{ mA}$ $I_F = 1.0\text{ mA}$ $I_F = 10\text{ mA}$	r_f	— — — —	2800 380 45 7	— — — —	Ω

Forward current $I_F = f(V_F)$



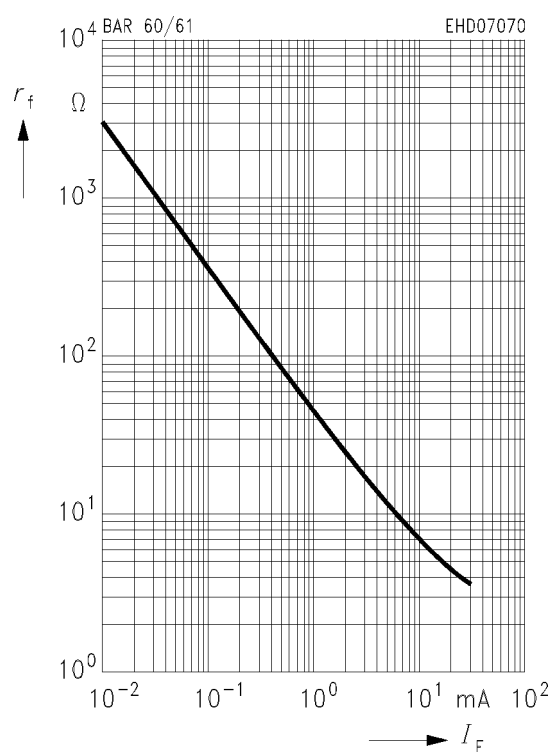
Forward current $I_F = f(T_S; T_A^*)$

*Package mounted on alumina

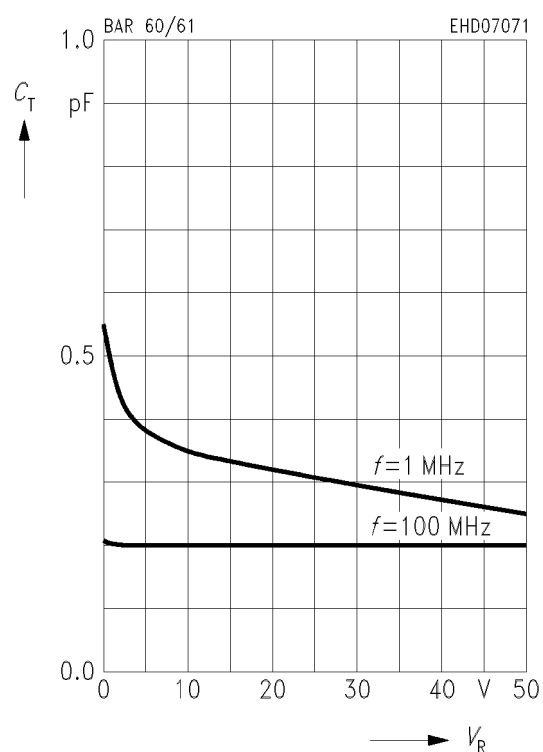


Forward resistance $r_f = f(I_F)$

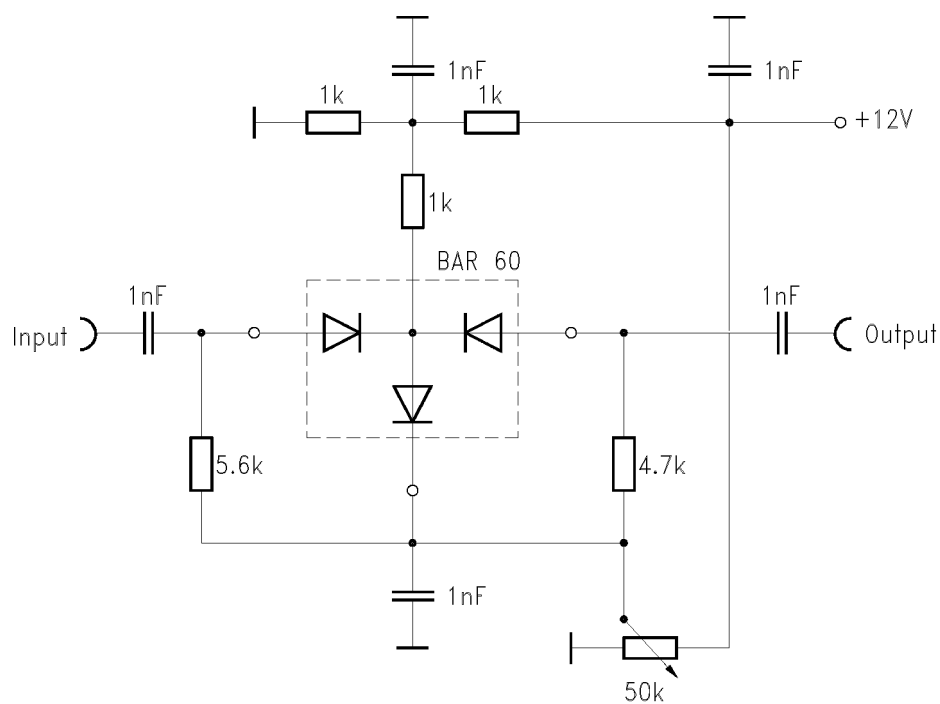
$f = 100 \text{ MHz}$



Diode capacitance $C_T = f(V_R)$

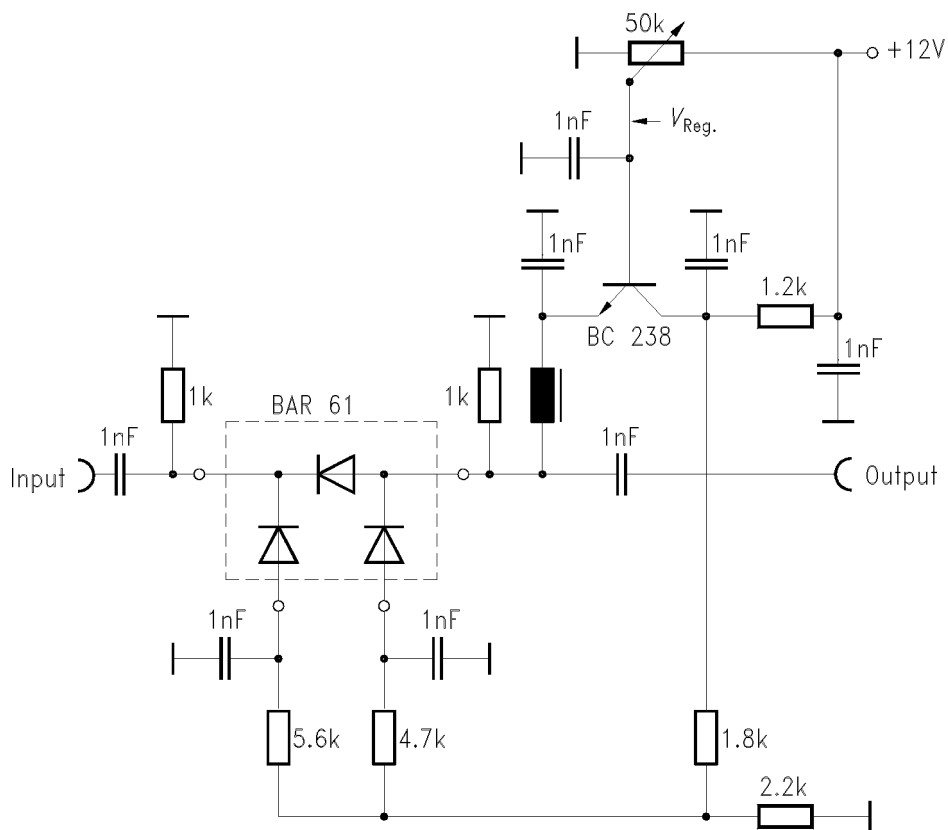


Application circuit for attenuation networks with diode BAR 60



EHM07025

Application circuit for attenuation networks with diode BAR 61



EHM07026