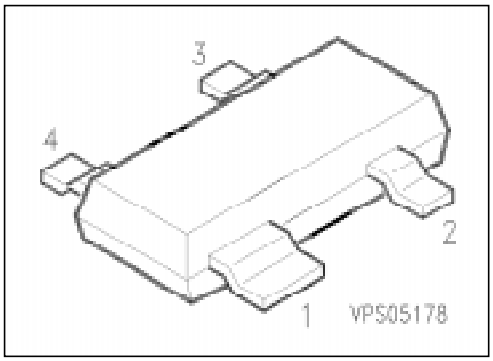
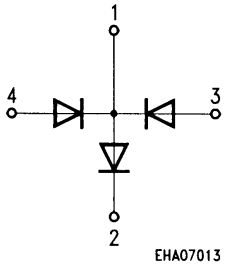
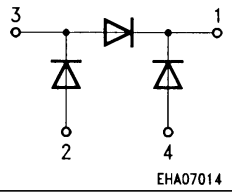
SIEMENS

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		SOT-143
BAR 61	61	Q62702-A120		

Maximum Ratings per Diode

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

Thermal Resistance

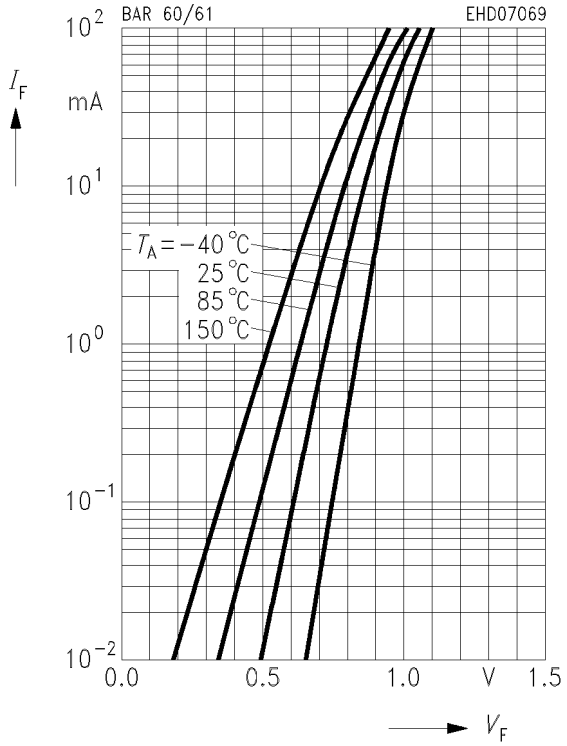
Junction - ambient[2)]	$R_{th\ JA}$	≤ 580	K/W
Junction - soldering point	$R_{th\ JS}$	≤ 340	

1) For detailed information see chapter Package Outlines.
2) Package mounted on alumina 15 mm × 16.7 mm × 0.7 mm.

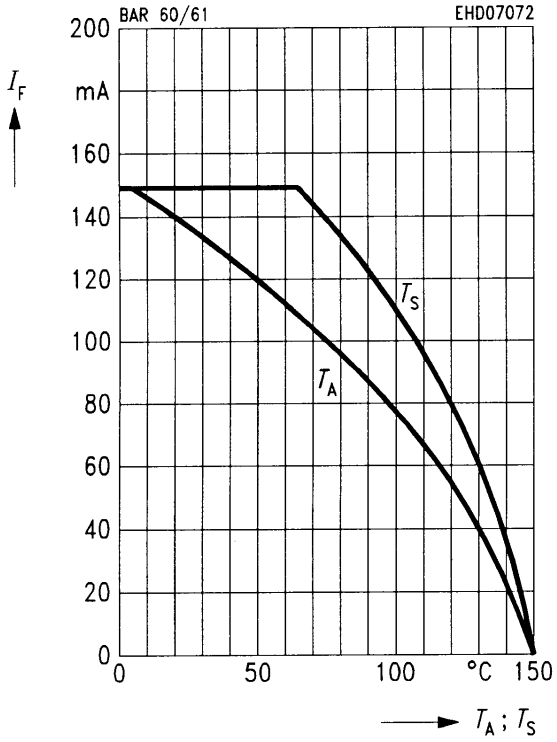
Electrical Characteristics per Diode
at T_A = 25 °C, unless otherwise specified.

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC/AC Characteristics					
Reverse current	I_R				
V_R = 50 V		–	–	100	nA
V_R = 100 V		–	–	1	µA
Forward voltage	V_F	–	–	1.25	V
I_F = 100 mA					
Diode capacitance	C_T				pF
V_R = 50 V, f = 1 MHz		–	0.25	0.5	
V_R = 0, f = 100 MHz		–	0.2	–	
Zero bias conductance	g_p	–	50	–	µS
V_R = 0, f = 100 MHz					
Charge carrier life time	τ_L	–	1	–	µs
I_F = 10 mA, I_R = 6 mA					
Differential forward resistance	r_f				Ω
f= 100 MHz, I_F = 0.01 mA		–	2800	–	
I_F = 0.1 mA		–	380	–	
I_F = 1.0 mA		–	45	–	
I_F = 10 mA		–	7	–	

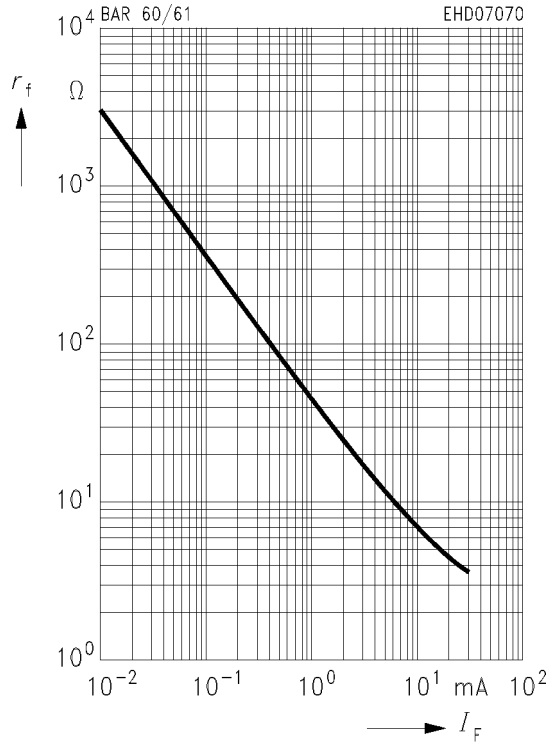
Forward current $I_F = f(V_F)$



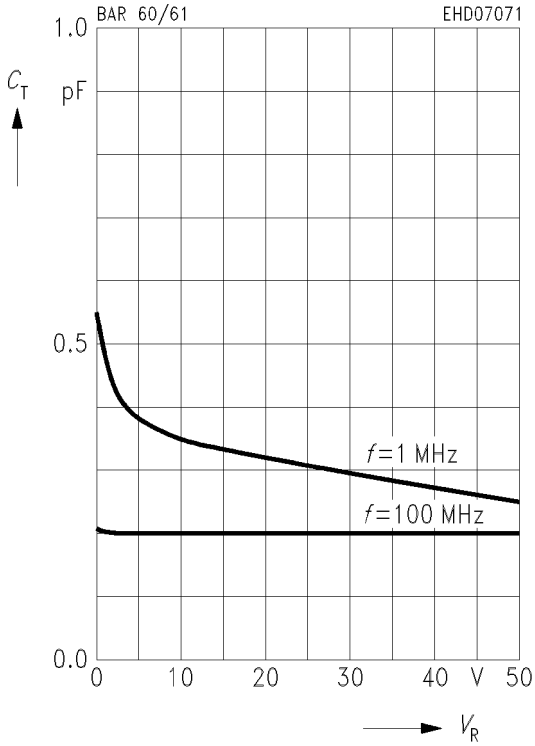
Forward current $I_F = f(T_S; T_A*)$
*Package mounted on alumina



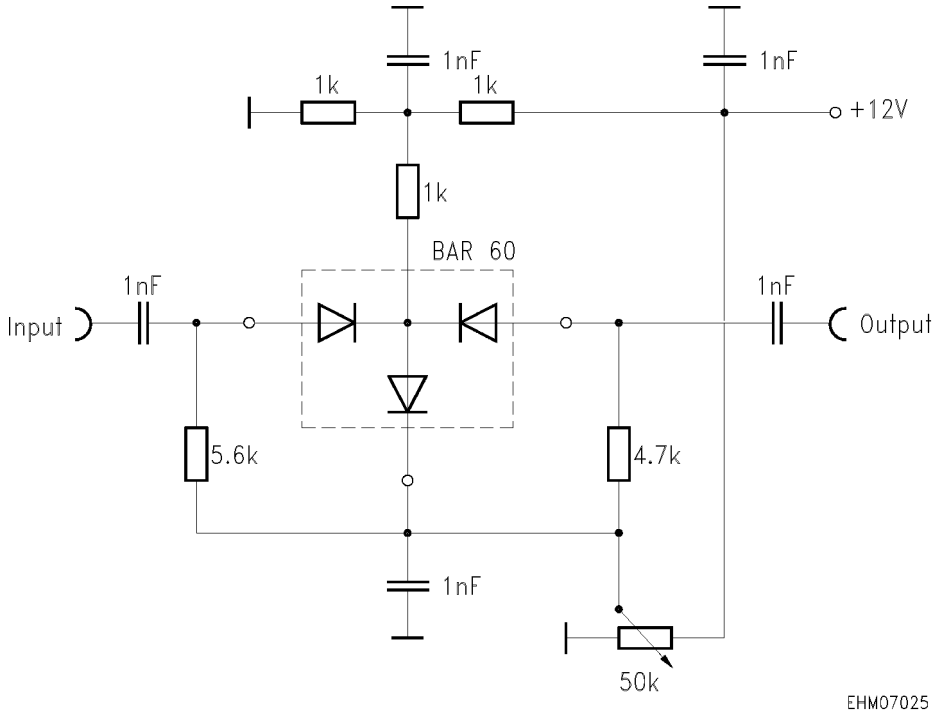
Forward resistance $r_f = f(I_F)$
f= 100 MHz



Diode capacitance $C_T = f(V_R)$



Application circuit for attenuation networks with diode BAR 60



Application circuit for attenuation networks with diode BAR 61

