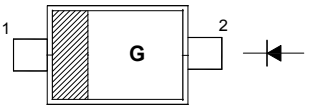
Silicon PIN Diodes

- PIN diode for high speed switching of RF signals
- Very low forward resistance (low insertion loss)
- Very low capacitance (high isolation)
- For frequencies up to 3GHz

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Marking Code: "**G**"
Simplified outline SOD-523 and symbol

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Reverse Voltage	V_R	50	V
Forward Current	I_F	100	mA
Power Dissipation	P_D	200	mW
Junction Temperature	T_J	150	°C
Operating Temperature Range	T_{op}	- 55 to + 125	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

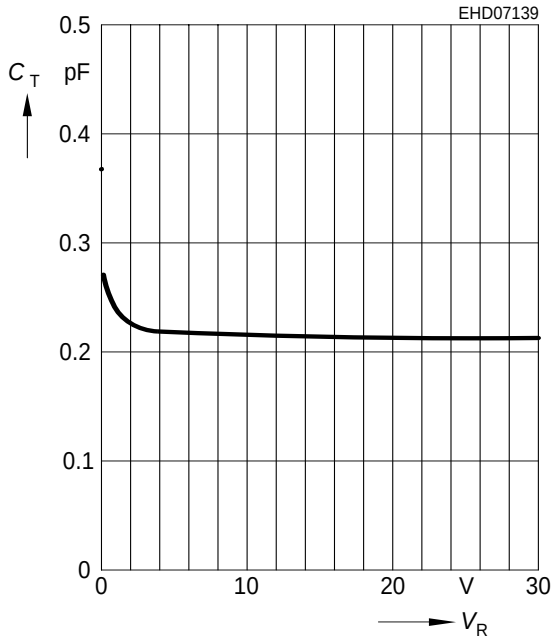
Characteristics at T_a = 25 °C

Parameter	Symbol	Min.	Typ.	Max.	Unit
Breakdown Voltage at I_R = 10 uA	$V_{(BR)}$	50	-	-	V
Reverse Current at V_R = 35 V	I_R	-	-	20	nA
Forward Voltage at I_F = 100 mA	V_F	-	-	1.2	V
Diode Capacitance at V_R = 5 V, f = 1 MHz at V_R = 0 V, f = 100 MHz	C_T	- -	- 0.3	0.5 -	pF
Charge carrier life time at I_F = 5 mA, f = 100 MHz at I_F = 10 mA, f = 100 MHz	r_f	- -	- 1	2 -	Ω
Forward Resistance at I_F = 10 mA, If = 6mA,measured at I_R = 3 mA, RL = 100 Ω	t_{rr}	-	75	-	ns
Series Inductance	L_s	-	0.6	-	nH

BAR63-02T

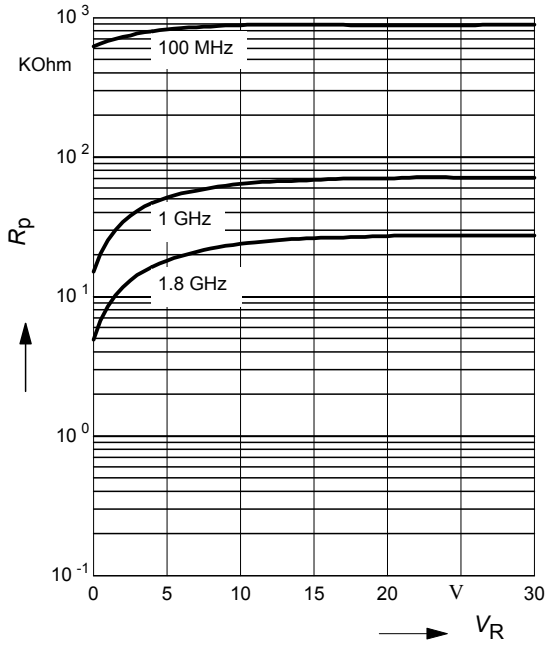
Diode capacitance $C_T = f(V_R)$

f = 1MHz - 1.8GHz



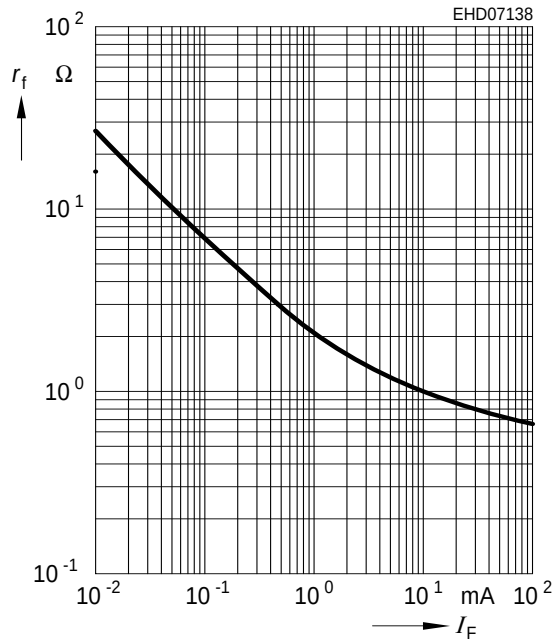
Reverse parallel resistance $R_P = f(V_R)$

f = Parameter



Forward resistance $r_f = f(I_F)$

f = 100MHz



Forward current $I_F = f(V_F)$

T_A = Parameter