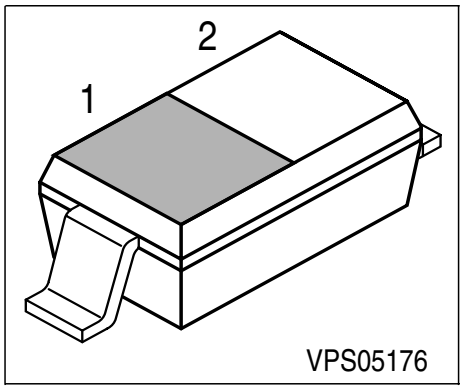
Silicon PIN Diode

- RF switch, RF attenuator for frequencies above 10 MHz
- Very low IM distortion



Type	Marking	Pin Configuration		Package
BA 597	A	1 = C	2 = A	SOD-323

Maximum Ratings

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	50	V
Forward current	I_F	100	mA
Total power dissipation, $T_S \leq 40°C$	P_{tot}	250	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 ... 150	°C

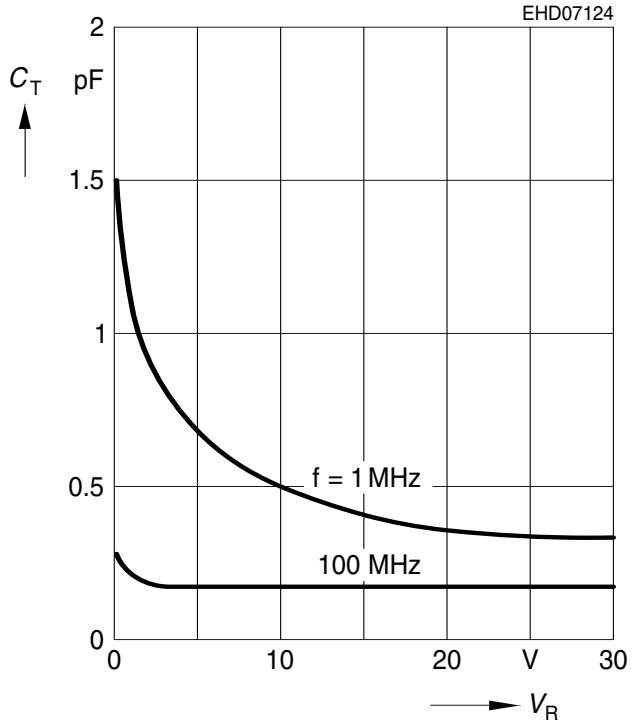
1) Package mounted on alumina 15mm x 16.7mm x 0.7mm

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC characteristics					
Reverse current V_R = 30 V	I_R	-	-	20	nA
Forward voltage I_F = 100 mA	V_F	-	0.9	-	V
AC Characteristics					
Diode capacitance V_R = 0 V, f = 100 MHz V_R = 10 V, f = 1 MHz	C_T	 - -	 0.27 0.52	 - -	pF
Forward resistance I_F = 1.5 mA, f = 100 MHz I_F = 10 mA, f = 100 MHz	r_f	 - -	 22 4.2	 - -	Ω
Charge carrier life time I_F = 10 mA, I_R = 6 mA, I_R = 3 mA	τ_{rr}	-	2.5	-	µs
Series inductance	L_s	-	1.8	-	nH

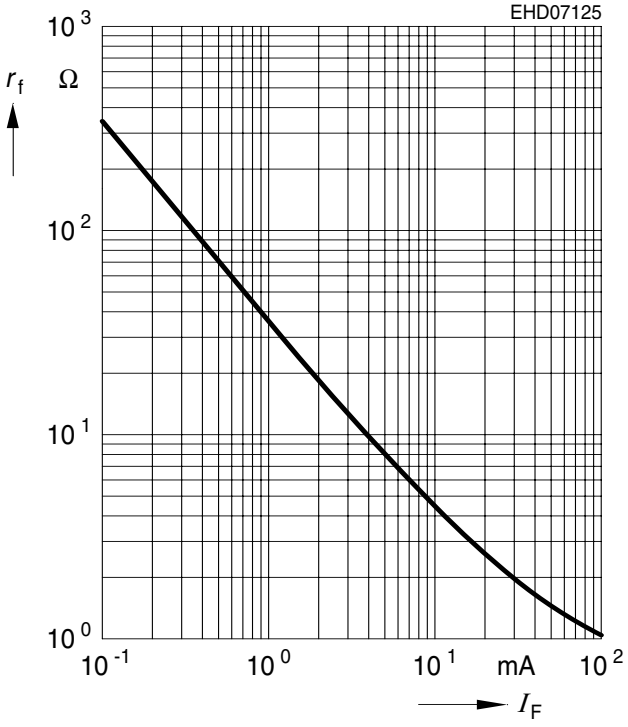
Diode capacitance $C_T = f(V_R)$

f = Parameter



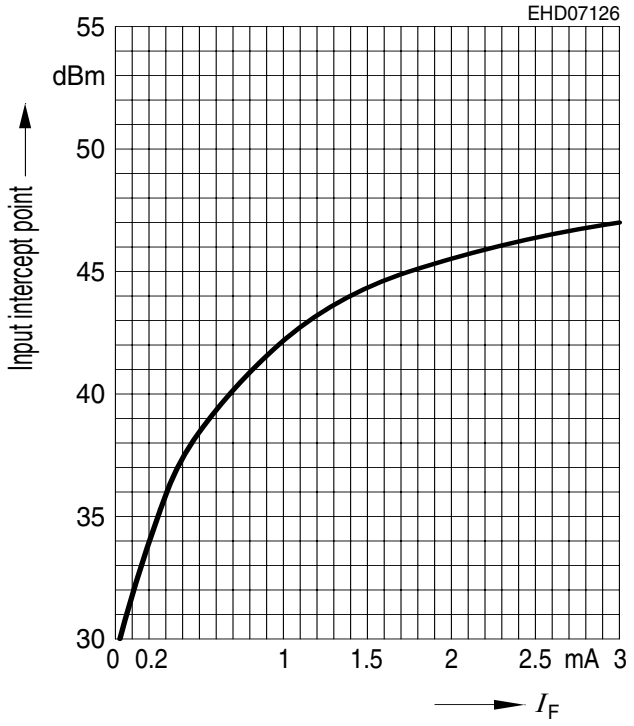
Forward resistance $r_f = f(I_F)$

f = 100MHz



3rd Harmonic intercept point vs forward current

f = 100 MHz



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