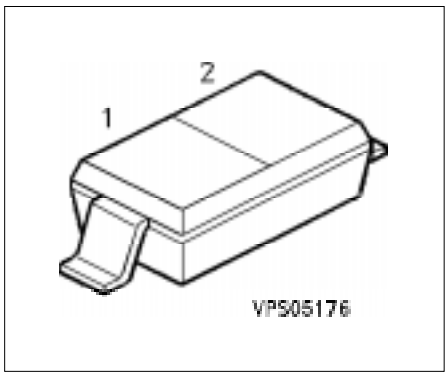
SIEMENS

Silicon PIN Diode

BA 597

Preliminary Data

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



Type	Ordering Code (taped)	Pin Configuration 1		2	Marking	Package
BA 597	UPON INQUIRY	C		A	yellow/R	SOD-323

Maximum Ratings

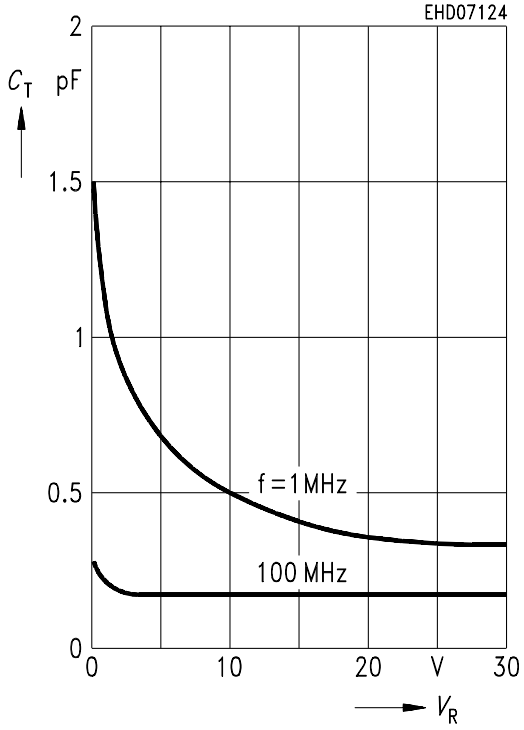
Parameter	Symbol	Values	Unit
Reverse voltage	V_R	50	V
Forward current	I_F	100	mA
Total power dissipation $T_S \leq 40$ °C[1)]	P_{tot}	250	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	– 55 … + 150	°C

1) Package mounted on aluminum 15 mm x 16.7 mm x 0.7 mm.

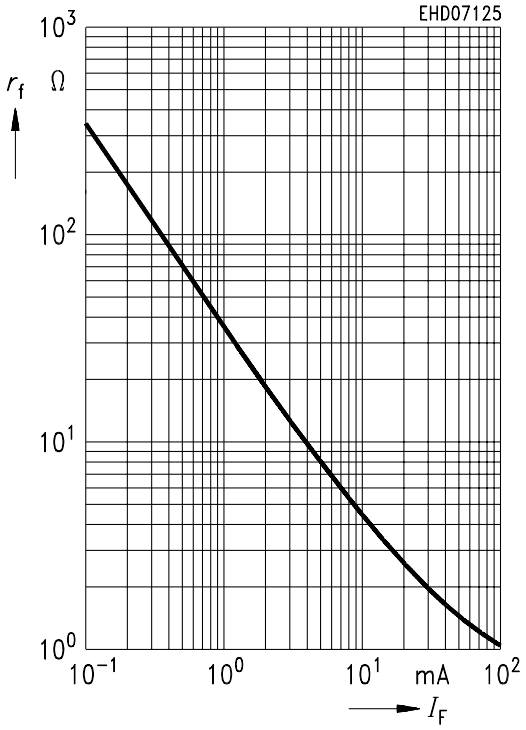
Characteristics per Diode
at T_A = 25 °C, unless otherwise specified.

Parameter	Symbol	Value			Unit
		min.	typ.	max.	
Reverse current V_R = 30 V	I_R	 –	 –	 20	nA
Forward voltage I_F = 100 mA	V_F	 –	 0.9	 –	V
Diode capacitance V_R = 10 V, f = 1 MHz V_R = 0 V, f = 100 MHz	C_T	 – –	 0.52 0.27	 – –	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 lifetime I_F = 10 mA, I_R = 6 mA, I_R = 3 mA	τ_L	 –	 2.5	 –	µs

Diode capacitance $C_T = f(V_R)$
f = 1 MHz, 100 MHz



Forward resistance $r_t = (I_F)$, f = 100 MHz



3rd Harmonic intercept point vs forward current f = 100 MHz