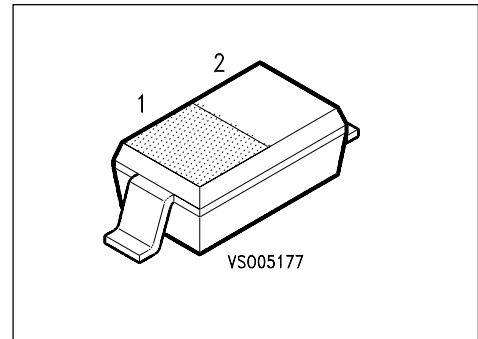


## Silicon PIN Diode

BA 596

### Preliminary Data

- Current-controlled RF resistor for switching and attenuating applications.
- Frequency range above 1 MHz
- Designed for low IM distortion



Type	Marking	Ordering Code (tape and reel)	Pin Configuration	Package <sup>1)</sup>
BA 596	white P	Q62702-A954		SOD-323

### Maximum Ratings

Parameter	Symbol	Values	Unit
Reverse voltage	$V_R$	50	V
Forward current	$I_F$	50	mA
Operating temperature range	$T_{op}$	- 55 ... + 125	°C
Storage temperature range	$T_{stg}$	- 55 ... + 150	

### Thermal Resistance

Junction - ambient	$R_{th JA}$	≤ 450	K/W
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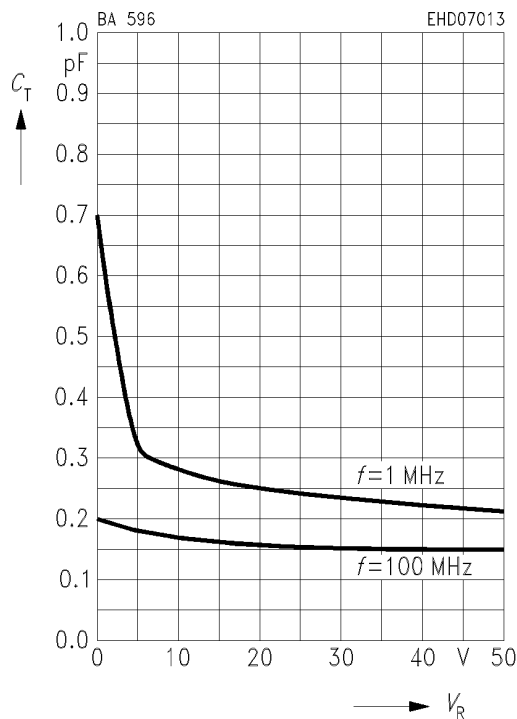
<sup>1)</sup> For detailed information see chapter Package Outlines.

### Electrical Characteristics

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Forward voltage $I_F = 50\text{ mA}$	$V_F$	–	–	1.15	V
Reverse current $V_R = 50\text{ V}$	$I_R$	–	–	50	nA
Diode capacitance $f = 1\text{ MHz}, V_R = 50\text{ V}$ $f = 100\text{ MHz}, V_R = 0\text{ V}$	$C_T$	–	0.23 0.2	0.35 –	pF
Forward resistance $f = 100\text{ MHz}$ $I_F = 10\text{ }\mu\text{A}$ $I_F = 1\text{ mA}$ $I_F = 10\text{ mA}$	$r_f$	–	2400 58 7.8	– – 10	$\Omega$
Zero bias conductance $f = 100\text{ MHz}, V_R = 0\text{ V}$	$g_p$	–	40	–	$\mu\text{S}$
Series inductance	$L_s$	–	2	–	nH

**Diode capacitance  $C_T = f(V_R)$**   
 $f = 1\text{ MHz} / f = 100\text{ MHz}$



**Forward resistance  $r_f = f(I_F)$**   
 $f = 100\text{ MHz}$

