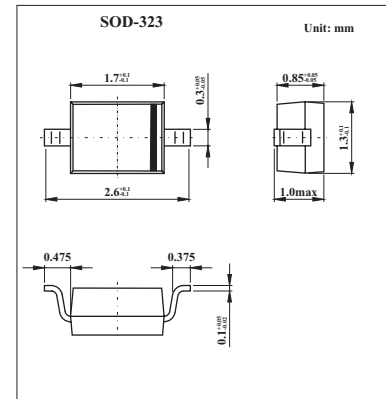


Silicon PIN Diode

BA595

■ Features

- Current-controlled RF resistor for switching and attenuating applications
- Frequency range 1 MHz ... 2 GHz
- Especially useful as antenna switch in TV-sat tuners
- Very low harmonics

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	50	V
Forward current	I_F	50	mA
Junction temperature	T_j	150	$^\circ\text{C}$
Operating temperature range	T_{op}	-55 to +125	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$
Junction - soldering point ¹⁾	R_{thJS}	≤ 370	K/W

Note

1. For calculation of R_{thJA} please refer to Application Note Thermal Resistance

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse current	I_R	$V_R = 30\text{ V}$			20	nA
Forward voltage	V_F	$I_F = 50\text{ mA}$			1.1	V
Diode capacitance	C_T	$V_R = 0\text{ V}, f = 100\text{ MHz}$		0.26	0.4	pF
		$V_R = 10\text{ V}, f = 1\text{ MHz}$		0.22	0.6	
Reverse parallel resistance	R_P	$V_R = 1\text{ V}, f = 100\text{ MHz}$		50		K Ω
		$V_R = 0\text{ V}, f = 1\text{ GHz}$		10		
Forward resistance	r_f	$I_F = 1.5\text{ mA}, f = 100\text{ MHz}$		22	40	Ω
		$I_F = 10\text{ mA}, f = 100\text{ MHz}$		4.5	7	
Charge carrier life time	τ_{rr}	$I_F = 10\text{ mA}, I_R = 6\text{ mA}$, measured at $I_R = 3\text{ mA}, R_L = 100\ \Omega$		1600		ns
I-region width	W_I			130		$\mu\text{ m}$

■ Marking

Marking	R
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