

## Silicon PIN Diodes

## BAR17

## ■ Features

- RF switch
- RF attenuator for frequencies above 1 MHz
- Low distortion factor
- Long-term stability of electrical characteristics

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

Parameter	Symbol	Value	Unit
Reverse voltage	$V_R$	100	V
Forward current	$I_F$	140	mA
Total power dissipation, $T_s \leq 95^\circ\text{C}^{1)}$	$P_{tot}$	250	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$
Operating temperature range	$T_{op}$	-55 to +150	$^\circ\text{C}$
Junction - ambient <sup>1)</sup>	$R_{thJA}$	$\leq 295$	K/W
Junction - soldering point	$R_{thJS}$	$\leq 215$	

Note

1. Package mounted on alumina  $15\text{ mm} \times 16.7\text{ mm} \times 0.7\text{ mm}$ .

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse current	$I_R$	$V_R = 50\text{ V}$			50	nA
		$V_R = 100\text{ V}$			1	$\mu\text{ A}$
Forward voltage	$V_F$	$I_F = 100\text{ mA}$		0.91	1	V
Diode capacitance	$C_T$	$V_R = 50\text{ V}, f = 1\text{ MHz}$		0.32	0.55	pF
		$V_R = 0, f = 100\text{ MHz}$		0.37		
Charge carrier life time	$\tau_L$	$I_F = 10\text{ mA}, I_R = 6\text{ mA}$		4		$\mu\text{ s}$
Forward resistance	$r_f$	$I_F = 0.01\text{ mA}, f = 100\text{ MHz}$		1150		$\Omega$
		$I_F = 0.1\text{ mA}, f = 100\text{ MHz}$		160		
		$I_F = 1\text{ mA}, f = 100\text{ MHz}$		23		
		$I_F = 10\text{ mA}, f = 100\text{ MHz}$		3.5		

## ■ Marking

Marking	L6
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