

## Silicon PIN Diodes

### BAR14;BAR15;BAR16

#### ■ Features

- RF switch
- RF attenuator for frequencies above 10 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, $T_s \leq 65^\circ\text{C}^{1)}$	$P_{tot}$	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 $^{1)}$	$R_{thJA}$	$\leq 500$	K/W
Junction - soldering point	$R_{thJS}$	$\leq 340$	

#### 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	$V_R$	$V_R = 50\text{ V}$			100	nA
		$V_R = 100\text{ V}$			1	$\mu\text{ A}$
Forward voltage	$V_F$	$I_F = 100\text{ mA}$		1.05		V
Diode capacitance	$C_T$	$V_R = 50\text{ V}, f = 1\text{ MHz}$		0.25	0.5	pF
		$V_R = 0, f = 100\text{ MHz}$		0.2		
Forward resistance	$r_f$	$I_F = 0.01\text{ mA}, f = 100\text{ MHz}$		2800		$\Omega$
		$I_F = 0.1\text{ mA}, f = 100\text{ MHz}$		380		
		$I_F = 1\text{ mA}, f = 100\text{ MHz}$		45		
		$I_F = 10\text{ mA}, f = 100\text{ MHz}$		7		
Zero bias conductance	$g_p$	$V_R = 0, f = 100\text{ MHz}$		50		$\mu\text{ S}$
Charge carrier life time	$t_{rr}$	$I_F = 10\text{ mA}, I_R = 6\text{ mA}$	0.7	1		$\mu\text{ S}$

#### ■ Marking

Type	BAR14	BAR15	BAR16
Marking	L7	L8	L9

