

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 ¹⁾	R_{thJA}	≤ 295	K/W
Junction - soldering point	R_{thJS}	≤ 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	μA
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	τ_L	$I_F = 10\text{ mA}, I_R = 6\text{ mA}$		4		μs
Forward resistance	r_f	$I_F = 0.01\text{ mA}, f = 100\text{ MHz}$		1150		Ω
		$I_F = 0.1\text{ mA}, f = 100\text{ MHz}$		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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