

Silicon PIN Diodes

BAR60;BAR61

■ Features

- RF switch
- RF attenuator for frequencies above 10 MHz

■ 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, $T_s \leq 65^\circ\text{C}$ (Note 1)	P_{tot}	250	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to +150	$^\circ\text{C}$
Operating temperature range	T_{op}	-55 to +150	$^\circ\text{C}$
Junction - ambient ¹⁾	$R_{\text{th JA}}$	≤ 580	K/W
Junction - soldering point	$R_{\text{th JS}}$	≤ 340	K/W

Note

1. Unit Rating. Total Rating = Unit Rating $\times$ 1.5■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse current	I_R	$V_R = 50\text{ V}$			100	nA
		$V_R = 100\text{ V}$			1	$\mu\text{ A}$
Forward voltage	V_F	$I_F = 100\text{ mA}$			1.25	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		
Zero bias conductance	g_p	$V_R = 0\text{ V}, f = 100\text{ MHz}$		50		$\mu\text{ S}$
Charge carrier life time	τ_L	$I_F = 10\text{ mA}, I_R = 6\text{ mA}$		1		$\mu\text{ S}$
Differential forward resistance	r_f	$f = 100\text{ MHz}, I_F = 0.01\text{ mA}$		2800		Ω
		$I_F = 0.1\text{ mA}$		380		
		$I_F = 1.0\text{ mA}$		45		
		$I_F = 10\text{ mA}$		7		

■ Marking

Type	BAR60	BAR61
Marking	60	61

