

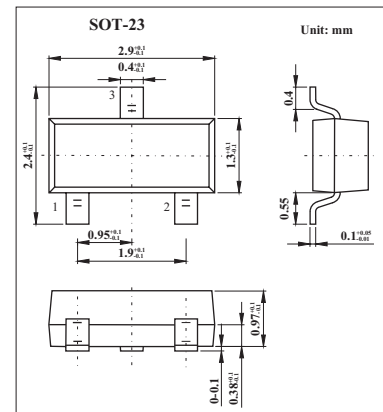
Silicon PIN Diode

BAR 63;BAR63-04

BAR 63-05;BAR63-06

■ Features

- PIN diode for high speed switching of RF signals
- Low forward resistance
- Very low capacitance
- For frequencies up to 3 GHz



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

Parameter	Symbol	Value	Unit
Reverse voltage	V_R	50	V
Forward current	I_F	100	mA
Total power dissipation			
BAR63 $T_s \leq 80^\circ\text{C}$	P_{tot}	250	mW
BAR 63-04,-05,-06 $T_s \leq 55^\circ\text{C}$		250	
Operating temperature range	T_{op}	-55 to +150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to +150	$^\circ\text{C}$
Junction - ambient ¹⁾			
BAR63	R_{thJA}	≤ 450	K/W
BAR 63-04,-05,-06		≤ 540	
Junction - soldering point			
BAR63	R_{thJS}	≤ 280	K/W
BAR63-04,-05,-06		≤ 380	

Note

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

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Breakdown voltage	$V_{(BR)}$	$I_R = 5 \mu\text{A}$	50			V
Reverse leakage	I_R	$V_R = 20\text{V}$			50	nA
Forward voltage	V_F	$I_F = 100\text{mA}$		0.95	1.2	V
Diode capacitance	C_T	$V_R = 0, f = 100\text{MHz}$		0.3		pF
		$V_R = 5\text{V}, f = 1\text{MHz}$		0.21	0.3	pF
Forward resistance	r_f	$I_F = 5\text{mA}, f = 100\text{MHz}$		1.2	2	Ω
		$I_F = 10\text{mA}, f = 100\text{MHz}$		1		
Charge carrier life time	t_s	$I_F = 10\text{mA}, I_R = 6\text{mA}, I_R = 3\text{mA}$		75		ns
Series inductance	L_s			1.4		nH

■ Marking

Type	BAR 63	BAR 63-04	BAR 63-05	BAR 63-06
Marking	G3	G4	G5	G6