

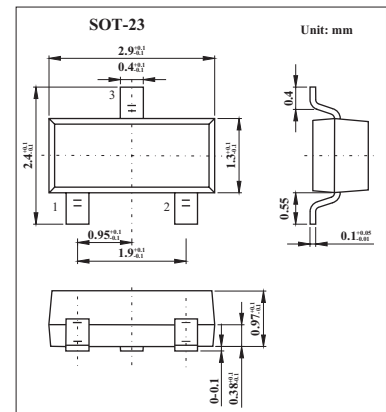
Silicon PIN Diode

BAR64;BAR64-04

BAR64-05;BAR64-06

■ Features

- High voltage current controlled
- RF resistor for RF attenuator and switches
- Frequency range above 1 MHz
- Low resistance and short carrier lifetime
- For frequencies up to 3 GHz



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

Parameter	Symbol	Value	Unit
Reverse voltage	V_R	200	V
Forward current	I_F	100	mA
Total power dissipation			
BAR64 $T_s \leq 90^\circ\text{C}$	P_{tot}	250	mW
BAR 63-04,-05,-06 $T_s \leq 65^\circ\text{C}$		250	
Junction temperature	T_j	150	$^\circ\text{C}$
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⁾			
BAR64	R_{thJA}	≤ 320	K/W
BAR 64-04,-05,-06		≤ 500	
Junction - soldering point			
BAR64	R_{thJS}	≤ 240	K/W
BAR64-04,-05,-06		≤ 340	

Note

1. Package mounted on alumina 15mm × 16.7mm × 0.7mm

BAR64;BAR64-04 BAR64-05;BAR64-06

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Breakdown voltage	$V_{(BR)}$	$I_R = 5 \mu\text{A}$	200			V
Forward voltage	V_F	$I_F = 50 \text{mA}$			1.1	V
Diode capacitance	C_T	$V_R = 20 \text{V}, f = 1 \text{MHz}$		0.23	0.35	pF
Forward resistance	r_f	$I_F = 1 \text{mA}, f = 100 \text{MHz}$		12.5	20	Ω
		$I_F = 10 \text{mA}, f = 100 \text{MHz}$		2.1	3.8	
		$I_F = 100 \text{mA}, f = 100 \text{MHz}$		0.85	1.35	
Charge carrier life time	τ_S	$I_F = 10 \text{mA}, I_R = 6 \text{mA}, I_R = 3 \text{mA}$		1.55		μs
Series inductance	L_S			1.4		nH

■ Marking

Type	BAR64	BAR64-04	BAR64-05	BAR64-06
Marking	Pos	PPs	PRs	PSs