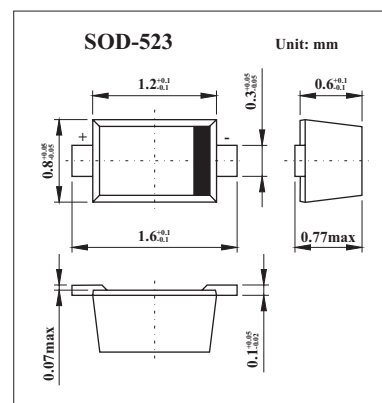


Silicon PIN Diode

BAR64-02W

■ Features

- High voltage current controlled RF resistor for RF attenuator and switches
- Frequency range above 1 MHz
- Low resistance and short carrier lifetime
- Very low inductance
- For frequencies up to 3 GHz
- Extremely small plastic SMD package

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

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	200	V
Forward current	I_F	100	mA
Total power dissipation, $T_s \leq 125^\circ\text{C}$	P_{tot}	250	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Operating temperature range	T_{op}	-55 to +150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$
Junction - ambient (Note 1)	R_{thJA}	≤ 220	K/W
Junction - soldering point	R_{thJS}	≤ 140	

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
Breakdown voltage	V_R	$I_{(BR)} = 5\ \mu\text{A}$	200			V
Forward voltage	V_F	$I_F = 50\ \text{mA}$			1.1	mV
Diode capacitance	C_T	$V_R = 20\ \text{V}, f = 1\ \text{MHz}$		0.23	0.35	pF
Case capacitance	C_C	$f = 1\ \text{MHz}$		0.09		
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	t_{rr}	$I_F = 10\ \text{mA}, I_R = 6\ \text{mA}, I_R = 3\ \text{mA}$		1.55		μs
Series inductance	L_s			0.6		nH

■ Marking

Marking	M
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