



BAR63-02V

RF PIN Diode

Features

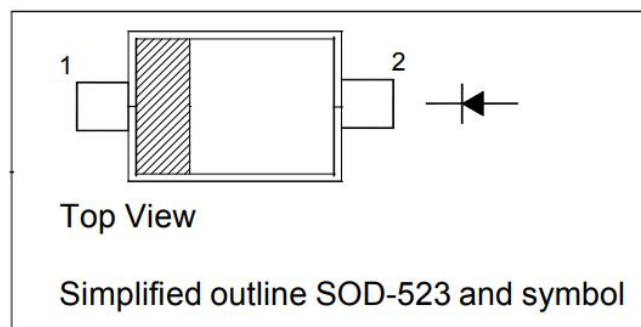
- PIN diode for high speed switching of RF signals
- Low forward resistance, small capacitance, small inductance
- Very low capacitance
- For frequencies up to 3GHz

Marking

Marking	G
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PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Limit	Unit
Reverse Voltage	V_R	50	V
Forward Current	I_F	100	mA
Total Power dissipation $T_s=115^{\circ}\text{C}$	P_{tot}	250	mW
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Operating Temperature Range	T_{op}	$-55\sim+150$	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	$-55\sim+150$	$^{\circ}\text{C}$

Thermal Resistance

Parameter	Symbol	Limit	Unit
Junction-ambient	R_{thJA}	≤ 220	K/W
Junction-soldering point	R_{thJS}	≤ 140	K/W

Electrical Characteristics ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
DC Characteristics						
Breakdown Voltage	V_{BR}	$I_R=5\mu\text{A}$	50			V
Reverse Leakage	I_R	$V_R=35\text{V}$			10	μA
AC Characteristics						
Forward Voltage	V_F	$I_F=100\text{mA}$		0.95	1.2	V
Diode Capacitance	C_T	$V_R=0\text{V}, f=100\text{MHz}$		0.3		pF
Diode Capacitance	C_T	$V_R=5\text{V}, f=1\text{MHz}$		0.21	0.3	pF
Case Capacitance	C_C	$f=1\text{MHz}$		0.09		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	τ_{tr}	$I_F=10\text{mA}, I_R=6\text{mA}, I_R=3\text{mA}$		75		μs
Series Inductance	L_S			0.6		nH

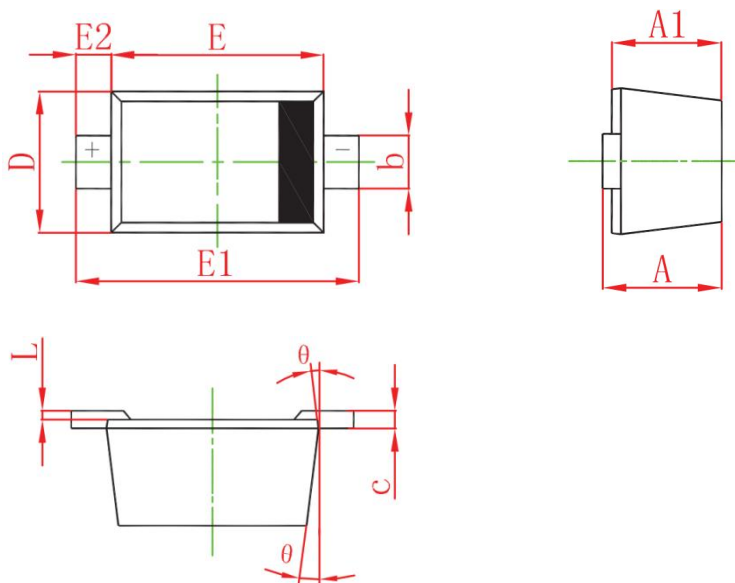


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Package Information

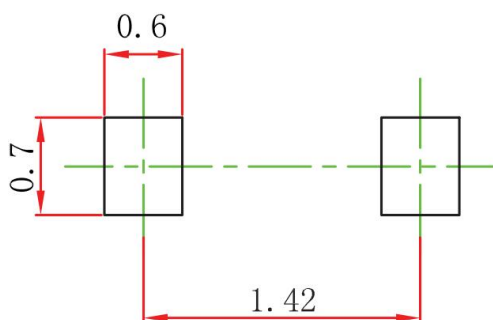
SOD-523

Dimensions in mm



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
θ	7° REF		7° REF	

SOD-523 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.