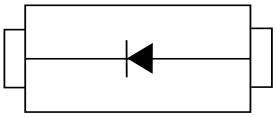
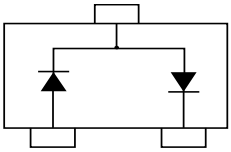
Feature

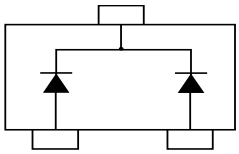
- High voltage current controlled RF resistor for RF attenuator and switches
- Frequency range above 1 MHz up to 6 GHz
- Very low capacitance at zero volt reverse bias at frequencies above 1 GHz
- Low forward resistance
- Very low signal distortion



PBAR64-03W
SOD-323



PBAR64-04W
SOT-323



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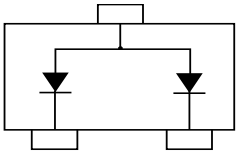


PBAR64-06W
SOT-323

Maximum Ratings at T_A = 25°C (unless otherwise specified)

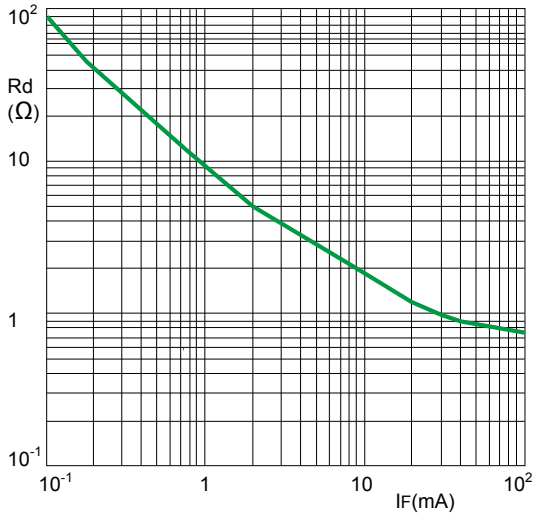
Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	150	V
Forward current	I_F	100	mA
Series inductance	L_S	1.8	nH
Total power dissipation	P_{tot}	250	mW
Operating junction temperature Range	T_j	-55 to 150	℃
Storage temperature	T_{stg}	-55 to 150	℃
Thermal resistance (junction to soldering point)	$R_{\Theta JS}$	≤370	℃/W

Electrical Characteristics at T_A = 25°C (unless otherwise specified)

Parameter		Symbol	Values			Unit
			Min.	Typ.	Max.	
DC Characteristics						
Breakdown voltage @ I_R=5μA		V_{BR}	150	-	-	V
Forward voltage @ I_F=50mA		V_F	-	-	1.1	V
AC Characteristics						
Diode capacitance	V_R=20V, f=1MHz	C_T	-	0.23	0.35	pF
	V_R=0V, f=100MHz		-	0.3	-	
	V_R=0V, f=1~1.8GHz		-	0.17	-	
Reverse parallel resistance	V_R=0V, f=100MHz	R_P	-	10	-	kΩ
	V_R=0V, f=1GHz		-	4	-	
	V_R=0V, f=1.8GHz		-	3	-	

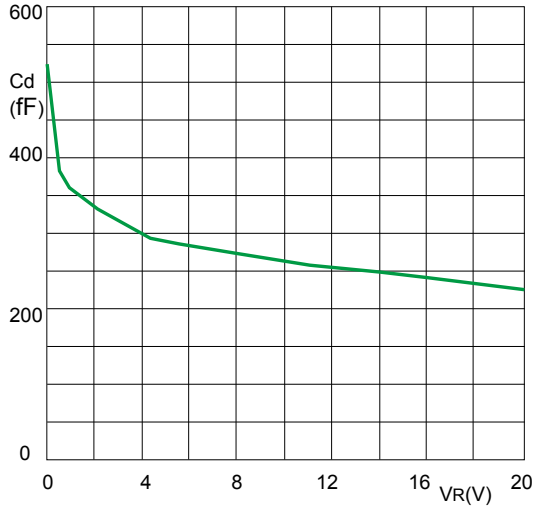
Forward resistance	I_F=1mA, f=100MHz	r_f	-	12.5	12.5	Ω
	I_F=10mA, f=100MHz		-	2.1	2.1	
	I_F=100mA, f=100MHz		-	0.85	0.85	

Typical Characteristics



f=100MHz ;T$_{amb}$=25℃

Fig 1. Forward resistance as a function of Forward current; typical values.



f=1MHz ;T$_{amb}$=25℃

Fig 2. Diode capacitance as a function of reverse Voltage ; typical values.

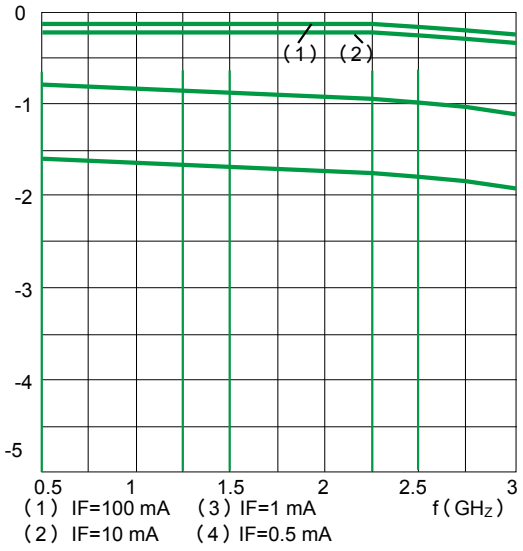


Fig 3.Diode inserted in series with a 50 Ω stripline circuit and biased via the analyzer Tee network.
T$_{amb}$=25℃
Isolation($|S_{21}|^2$) of the diode as a function of frequency; typical values.

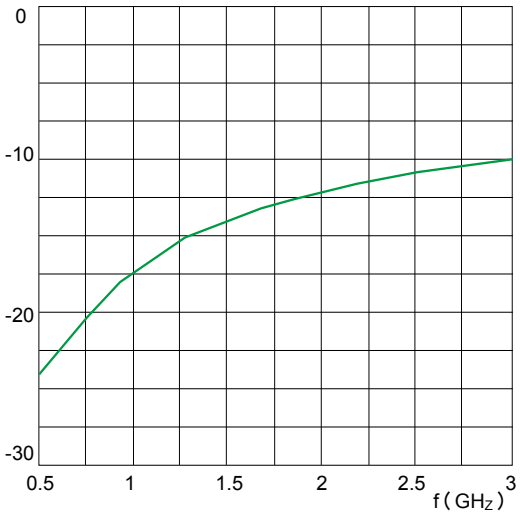
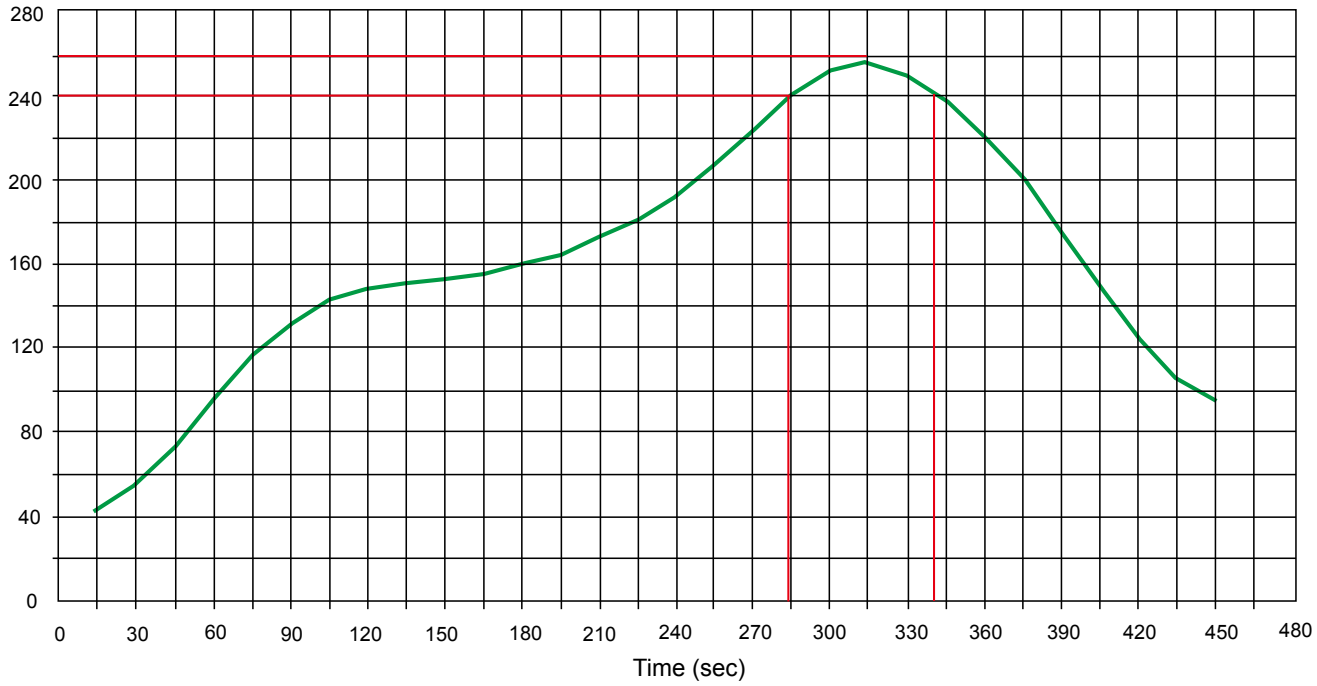


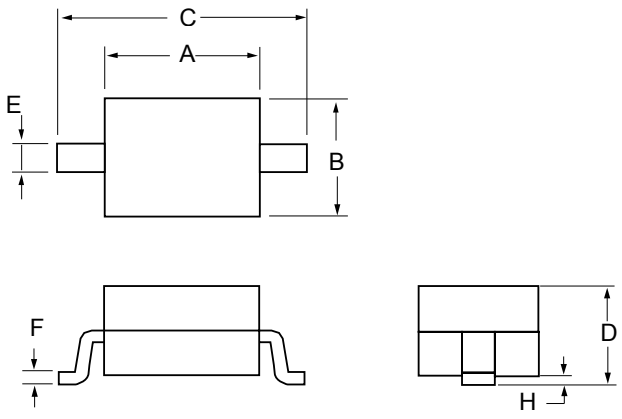
Fig 4.Diode zero biased and inserted in series with a 50 Ω stripline circuit .
T$_{amb}$=25℃.
Isolation($|S_{21}|^2$) of the diode as a function of frequency; typical values.

Solder Reflow Recommendation

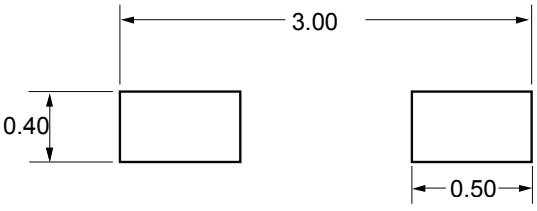
Peak Temp=257℃, Ramp Rate=0.802deg. ℃/sec



Product dimension (SOD-323)

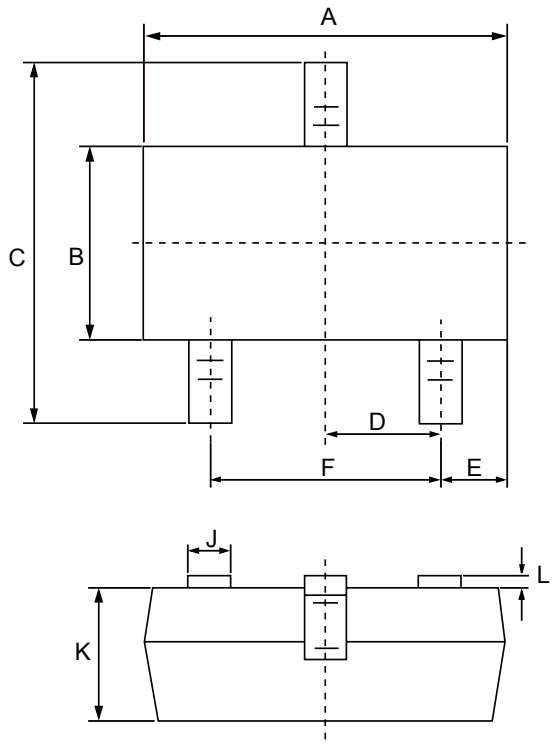


Dim	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.063	0.075	1.60	1.90
B	0.045	0.057	1.15	1.45
C	0.090	0.106	2.30	2.70
D	0.031	0.043	0.80	1.00
E	0.010	0.01	0.25	0.40
F	0.004	0.007	0.09	0.18
H	0.000	0.004	0.00	0.10



Unit:mm

Product dimension (SOT-323)



Dim	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	1.80	2.20	0.071	0.087
B	1.15	1.35	0.045	0.053
C	2.00	2.40	0.079	0.095
D	0.65BSC		0.026BSC	
E	0.45	0.60	0.0177	0.0236
F	1.20	1.40	0.047	0.055
G	0.10	0.25	0.004	0.010
H	0.425REF		0.017REF	
J	0.30	0.40	0.012	0.016
K	0.7REF		0.028REF	
L	0.013	0.100	0.0005	0.0040
θ	0°	10°	0°	10°

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