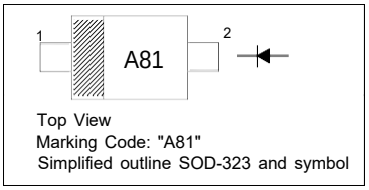
BAP50-03 GENERAL PURPOSE PIN DIODE

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Marking Code: "A81"
Simplified outline SOD-323 and symbol

FEATURES

- Low diode capacitance
- Low diode forward resistance

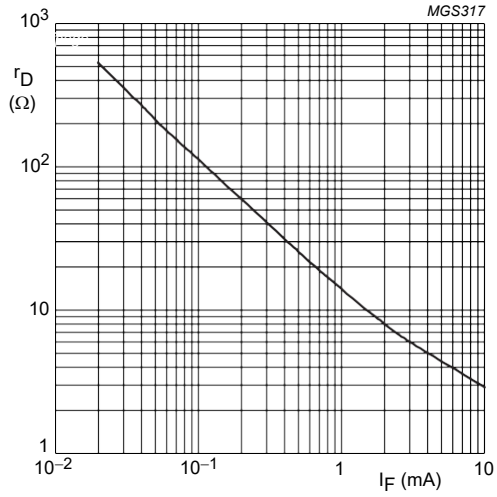
Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25℃

Parameter	Symbo	Limit	Unit
Continuous Reverse Voltage	V_R	50	V
Continuous Forward Current	I_F	50	mA
Power Dissipation (Ta=90℃)	P_D	200	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	625	℃/W
Junction Temperature	T_j	150	℃
Storage Temperature	T_{STG}	-55~+150	℃

Electrical Ratings @Ta=25℃

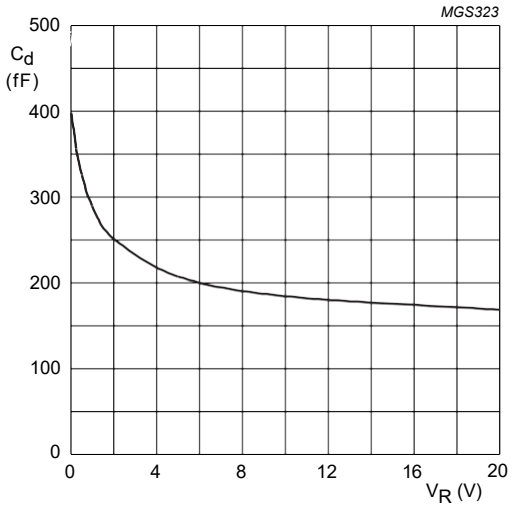
Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Continuous reverse voltage	V_R	50			V	I_R=10μA
Forward voltage	V_F			1.1	V	I_F=50mA
Reverse current	I_R			100	nA	V_R=50V
Diode capacitance	C_{d1}			0.91	pF	V_R=0V,f=1MHz
	C_{d2}			0.55	pF	V_R=1V,f=1MHz
	C_{d3}			0.35	pF	V_R=5V,f=1MHz
Diode forward resistance	r_D			40	Ω	I_F=0.5mA , f=100MHz; note1
	r_D			25	Ω	I_F=1mA , f=100MHz;note1
	r_D			5	Ω	I_F=10mA , f=100MHz;note1

Typical Characteristics



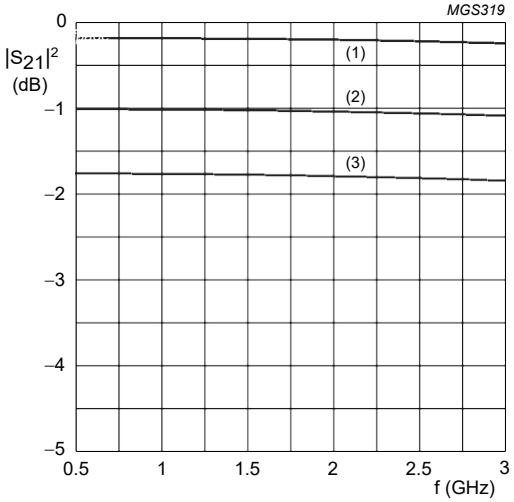
f = 100 MHz; T_j = 25 °C.

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



f = 1 MHz; T_j = 2 5 ° C.

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

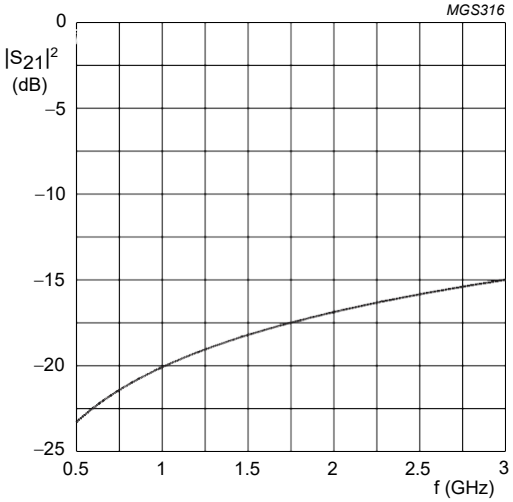


(1) I_F = 10 mA. (2) I_F = 1 mA. (3) I_F = 0.5 mA.

Diode inserted in series with a 50 Ω stripline circuit and biased via the analyzer Tee network.

T_{amb} = 25 °C.

Fig.3 Insertion loss ($|S_{21}|^2$) of the diode as a function of frequency; typical values.



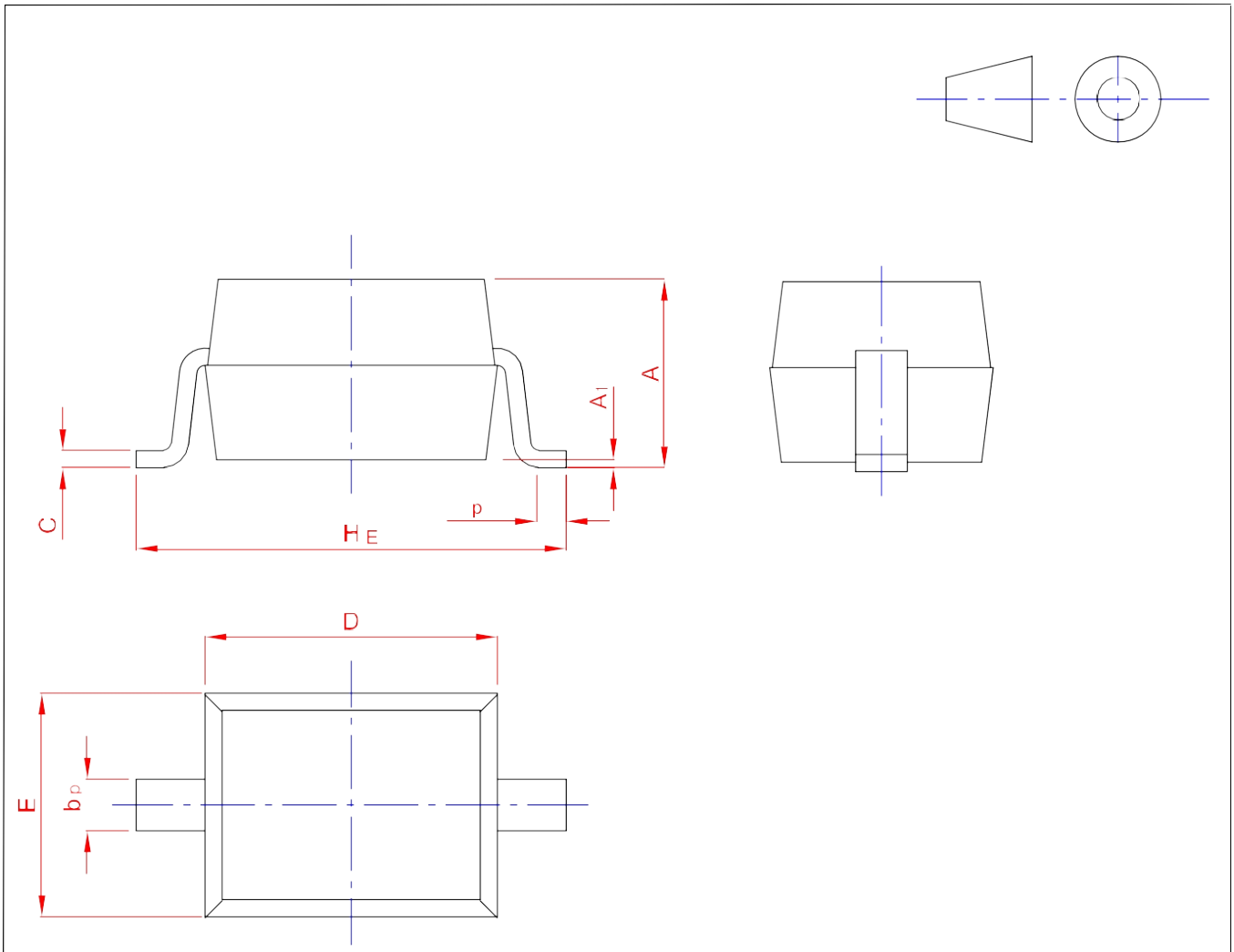
Diode zero biased and inserted in series with a 50 Ω stripline circuit.

T_{amb} = 25 °C.

Fig.4 Isolation ($|S_{21}|^2$) of the diode as a function of frequency; typical values.

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads **SOD-323**



UNIT	A	b_p	C	D	E	H_E	A_1	L_p
mm	1.20 0.90	0.40 0.25	0.15 0.10	1.80 1.60	1.35 1.15	2.80 2.30	0.10 0.01	0.50 0.20