

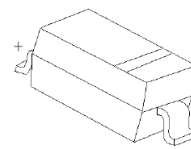
GENERAL PURPOSE PIN DIODES

FEATURES

- Low diode capacitance
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MARKING: A81

Low diode forward resistance

SOD-323


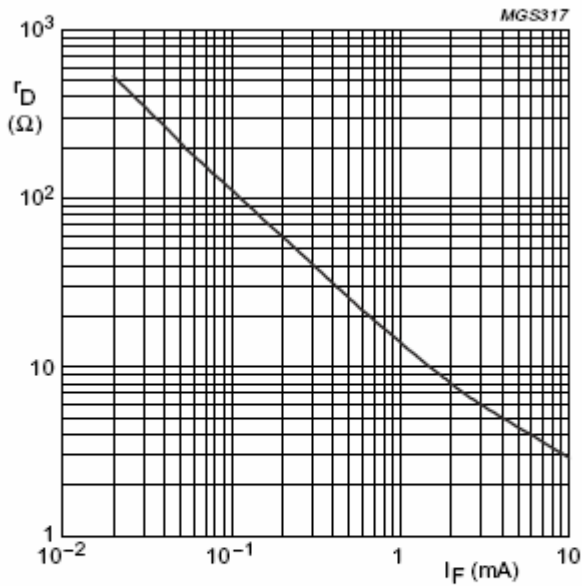
Maximum Ratings and Electrical Characteristics, Single Diode @T_A=25°C

Parameter	Symbol	Limits	Unit
Continuous reverse voltage	V _R	50	V
Continuous Forward Current	I _F	50	mA
Power Dissipation (T _A =90°C)	P _d	200	mW
Thermal Resistance Junction to Ambient	R _{θJA}	85	K/W
Junction temperature	T _j	-65~+150	°C
Storage temperature	T _{STG}	-65~+150	°C

Electrical Ratings @T_A=25°C

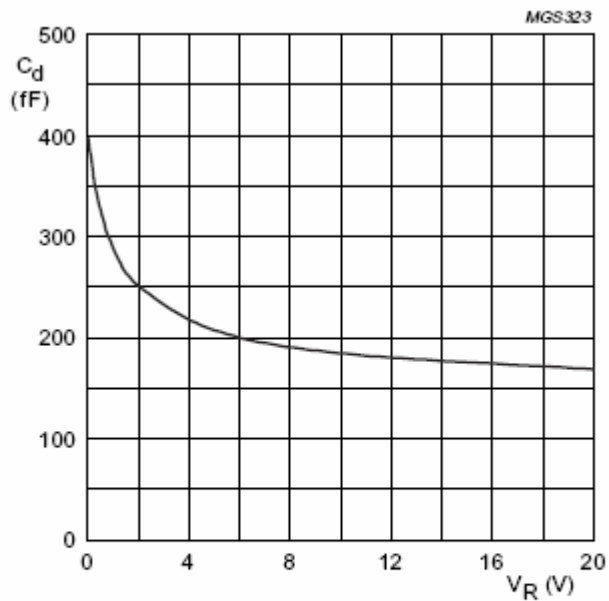
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Continuous reverse voltage	V _R	50			V	I _R =10μA
Forward voltage	V _F			1.1	V	I _F =50mA
Reverse current	I _R			100	nA	V _R =50V
Diode capacitance	C _{d1A}			0.91	pF	V _R =0V, f=1MHz
	C _{d1B}			1.11	pF	V _R =0V, f=1MHz
	C _{d2}			0.55	pF	V _R =1V, f=1MHz
	C _{d3}			0.35	pF	V _R =5V, f=1MHz
Diode forward resistance	r _D			40	Ω	I _F =0.5mA, f=100MHz; note 1
	r _D			25	Ω	I _F =1mA, f=100MHz; note 1
	r _D			5	Ω	I _F =10mA, f=100MHz; note 1

Note 1. Guaranteed on AQL basis: inspection level S4,AQL 1.0.



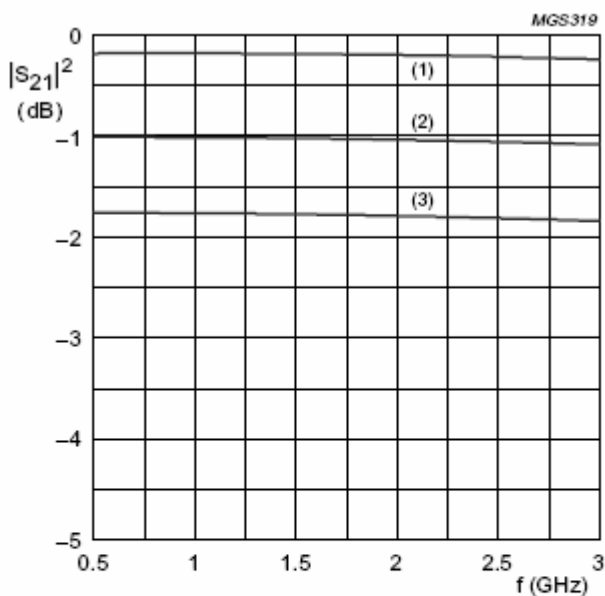
$f = 100 \text{ MHz}; T_j = 25 \text{ }^\circ\text{C}.$

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



$f = 1 \text{ MHz}; T_j = 25 \text{ }^\circ\text{C}.$

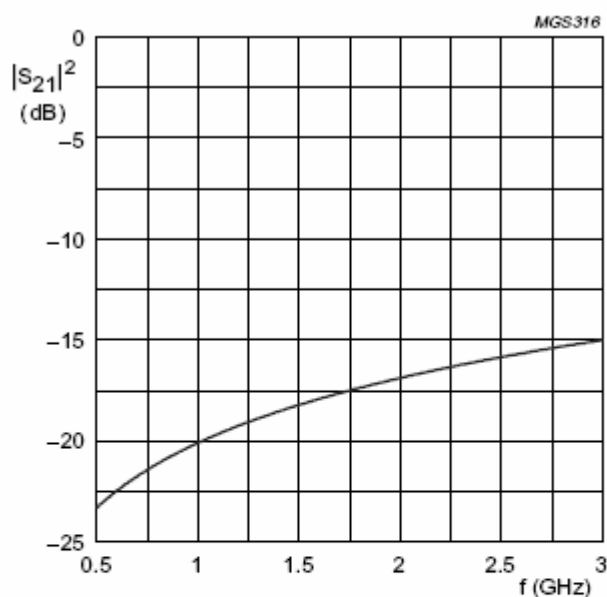
Fig.2 Diode capacitance as a function of reverse voltage; typical values.



(1) $I_F = 10 \text{ mA}.$ (2) $I_F = 1 \text{ mA}.$ (3) $I_F = 0.5 \text{ mA}.$

Diode inserted in series with a $50 \text{ } \Omega$ stripline circuit and biased via the analyzer Tee network.
 $T_{amb} = 25 \text{ }^\circ\text{C}.$

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 $50 \text{ } \Omega$ stripline circuit.
 $T_{amb} = 25 \text{ }^\circ\text{C}.$

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