Elektronische Bauelemente

BAP51W-02

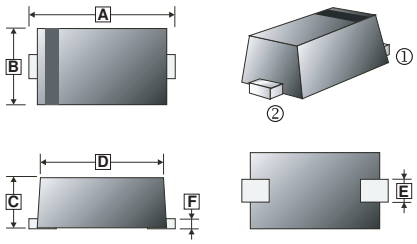
Small Signal General Purpose PiN Diode

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Low Diode Capacitance
- Low Diode Forward Resistance

SOD-523



MARKING

A5

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-523	8K	7 inch

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.50	1.70	D	-	-
B	0.75	0.85	E	0.25	0.35
C	0.70	0.50	F	0.07	0.17

MAXIMUM RATINGS (Single diode @ T_A = 25℃)

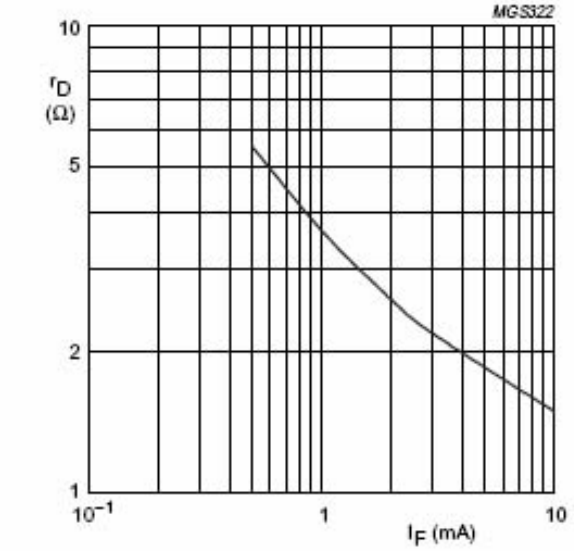
Parameter	Symbol	Ratings	Unit
Continuous Reverse Voltage	V_R	60	V
Continuous Forward Current	I_F	50	mA
Power Dissipation (T_A = 90℃)	P_D	715	mW
Power Dissipation		150	
Thermal Resistance from Junction to soldering point	$R_{\theta JS}$	85	°C / W
Junction, Storage Temperature	T_J, T_{STG}	-55 ~ +150	°C

ELECTRICAL CHARACTERISTICS (at Ta = 25°C unless otherwise specified)

Parameters	Symbol	Min.	Typ.	Max.	Unit	Test 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}[1]	-	0.4	-	pF	V_R = 0, f =1MHz
	C_{D2}	-	-	0.55		V_R = 1, f =1MHz
	C_{D3}	-	-	0.35		V_R = 5 V, f =1MHz
Diode Forward Resistance[1]	r_D	-	-	9	Ω	I_F = 0.5 mA, f =100 MHz
		-	-	6.5		I_F = 1 mA, f =100 MHz
		-	-	2.5		I_F = 10 mA, f =100 MHz

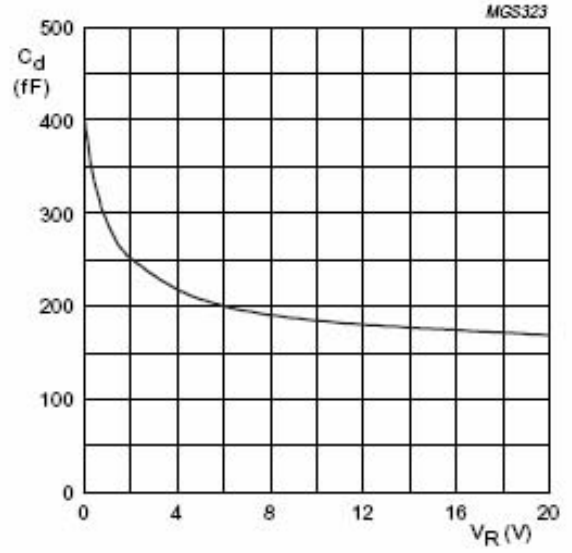
Note:
1. Guaranteed on AQL basis: inspection level S4,AQL 1.0

RATINGS AND CHARACTERISTIC CURVES



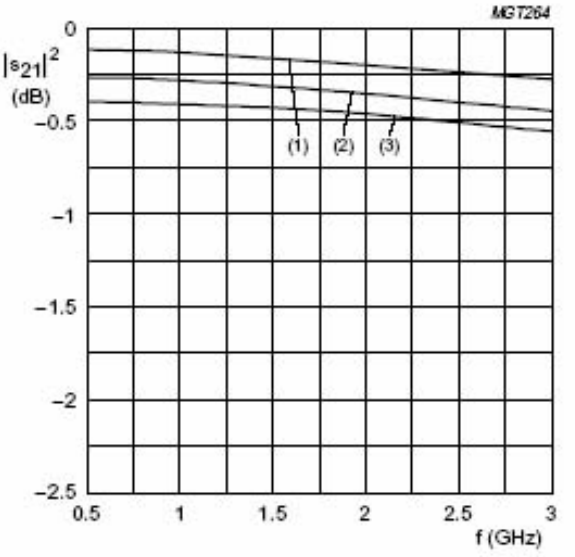
f = 100 MHz; T_j = 25 °C.

Fig.2 Forward resistance as a function of forward current; typical values.



f = 1 MHz; T_j = 25 °C.

Fig.3 Diode capacitance as a function of reverse voltage; typical values.

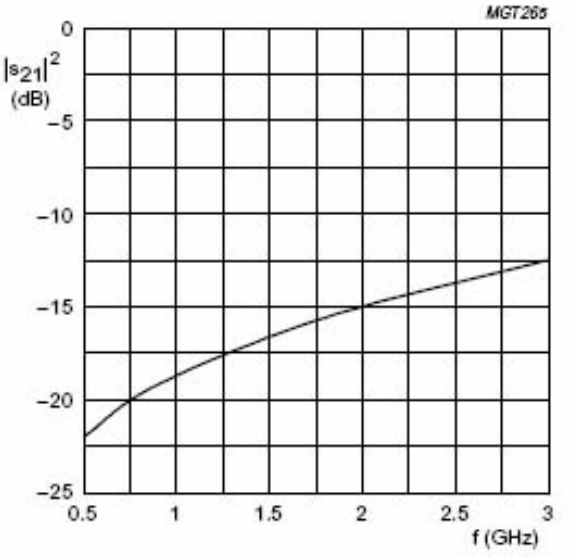


(1) I_F = 10 mA. (2) I_F = 1 mA. (3) I_F = 0.5 mA.

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

T_{amb} = 25 °C.

Fig.4 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.5 Isolation ($|s_{21}|^2$) of the diode as a function of frequency; typical values.