

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

FEATURES

- Low Diode Capacitance
- Low Diode Forward Resistance

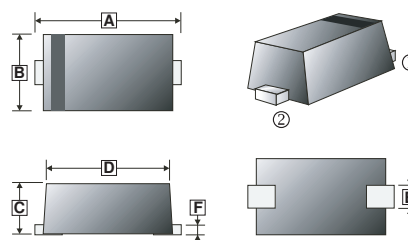
MARKING

A5

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-523	8K	7 inch

SOD-523



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 @ $T_A = 25^\circ\text{C}$)

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

ELECTRICAL CHARACTERISTICS (at $T_A = 25^\circ\text{C}$ unless otherwise specified)

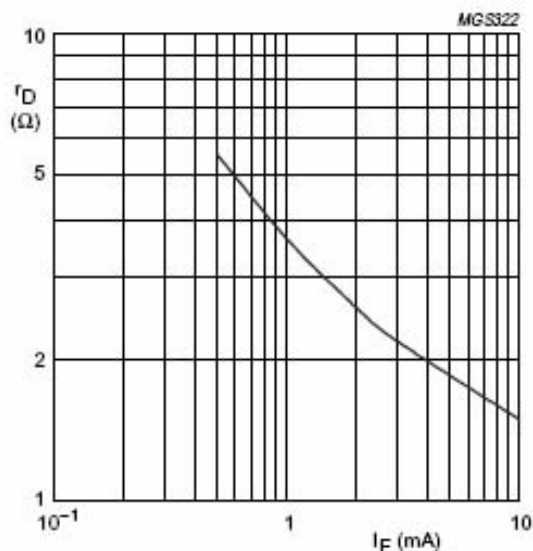
Parameters	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Continuous Reverse Voltage	V_R	50	-	-	V	$I_R = 10\mu\text{A}$
Forward Voltage	V_F	-	-	1.1	V	$I_F = 50\text{mA}$
Reverse Current	I_R	-	-	100	nA	$V_R = 50\text{V}$
Diode Capacitance	C_{D1}	-	0.4	-	pF	$V_R = 0, f = 1\text{MHz}$
	C_{D2}	-	-	0.55		$V_R = 1, f = 1\text{MHz}$
	C_{D3}	-	-	0.35		$V_R = 5\text{V}, f = 1\text{MHz}$
Diode Forward Resistance ¹	r_D	-	-	9	Ω	$I_F = 0.5\text{mA}, f = 100\text{MHz}$
		-	-	6.5		$I_F = 1\text{mA}, f = 100\text{MHz}$
		-	-	2.5		$I_F = 10\text{mA}, f = 100\text{MHz}$

Note:

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

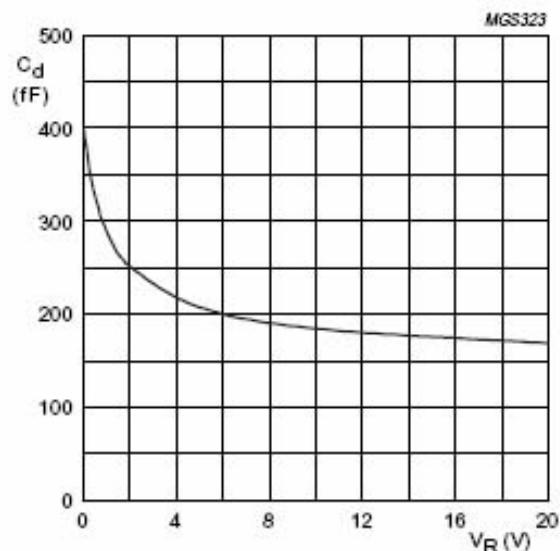
RATINGS AND CHARACTERISTIC CURVES

BAP51-02



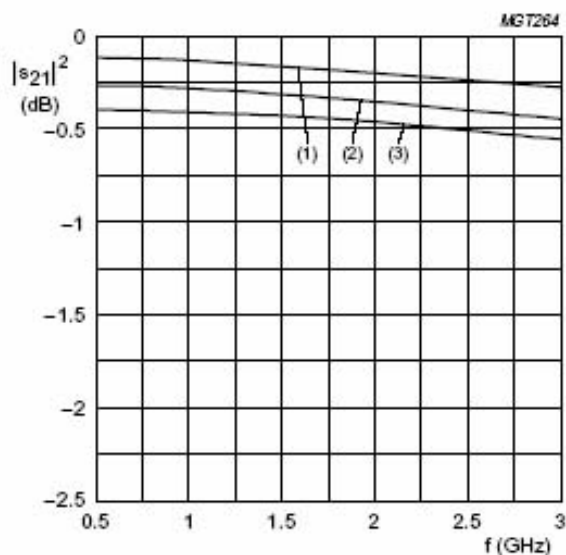
$f = 100$ MHz; $T_j = 25$ °C.

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.

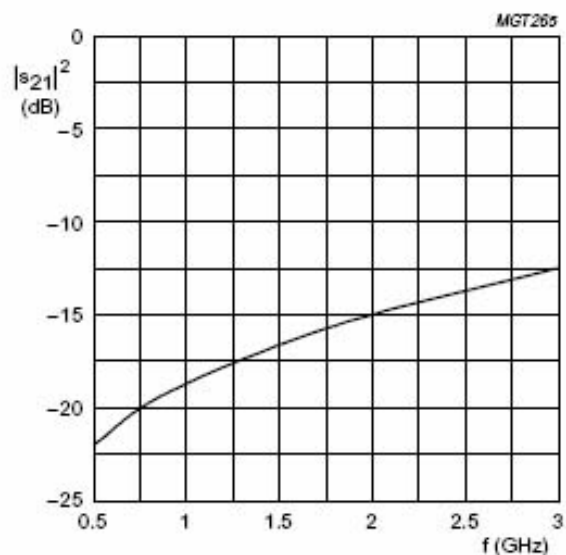


(1) $I_F = 10$ mA. (2) $I_F = 1$ mA. (3) $I_F = 0.5$ mA.

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.