

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

## FEATURES

- Low Diode Capacitance
- Low Diode Forward Resistance

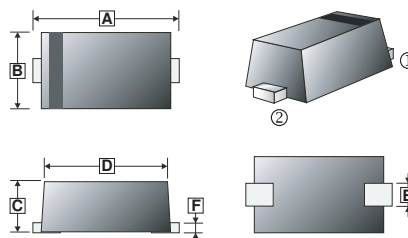
## MARKING

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<sub>A</sub> = 25°C)

Parameter	Symbol	Ratings	Unit
Continuous Reverse Voltage	V <sub>R</sub>	60	V
Continuous Forward Current	I <sub>F</sub>	50	mA
Power Dissipation (T <sub>A</sub> = 90°C)	P <sub>D</sub>	715	mW
Power Dissipation		150	
Thermal Resistance from Junction to soldering point	R <sub>θJS</sub>	85	°C / W
Junction, Storage Temperature	T <sub>J</sub> , T <sub>STG</sub>	-55 ~ +150	°C

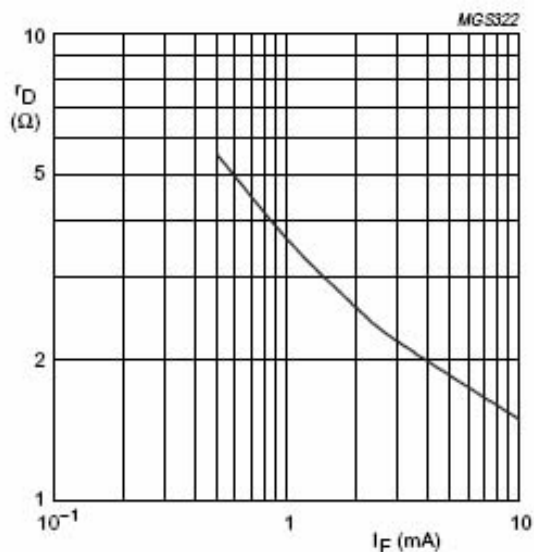
## ELECTRICAL CHARACTERISTICS (at T<sub>a</sub> = 25°C unless otherwise specified)

Parameters	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Continuous Reverse Voltage	V <sub>R</sub>	50	-	-	V	I <sub>R</sub> = 10μA
Forward Voltage	V <sub>F</sub>	-	-	1.1	V	I <sub>F</sub> = 50mA
Reverse Current	I <sub>R</sub>	-	-	100	nA	V <sub>R</sub> = 50V
Diode Capacitance	C <sub>D1</sub> <sup>1</sup>	-	0.4	-	pF	V <sub>R</sub> = 0, f = 1MHz
	C <sub>D2</sub>	-	-	0.55		V <sub>R</sub> = 1, f = 1MHz
	C <sub>D3</sub>	-	-	0.35		V <sub>R</sub> = 5 V, f = 1MHz
Diode Forward Resistance <sup>1</sup>	r <sub>D</sub>	-	-	9	Ω	I <sub>F</sub> = 0.5 mA, f = 100 MHz
		-	-	6.5		I <sub>F</sub> = 1 mA, f = 100 MHz
		-	-	2.5		I <sub>F</sub> = 10 mA, f = 100 MHz

Note:

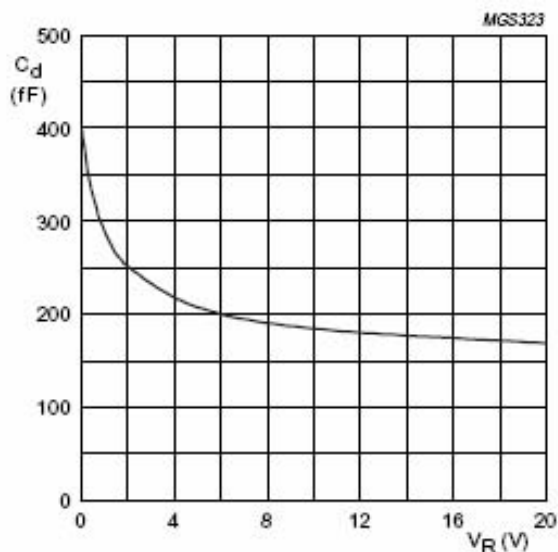
1. Guaranteed on AQL basis: inspection level S4, AQL 1.0

**RATINGS AND CHARACTERISTIC CURVES**



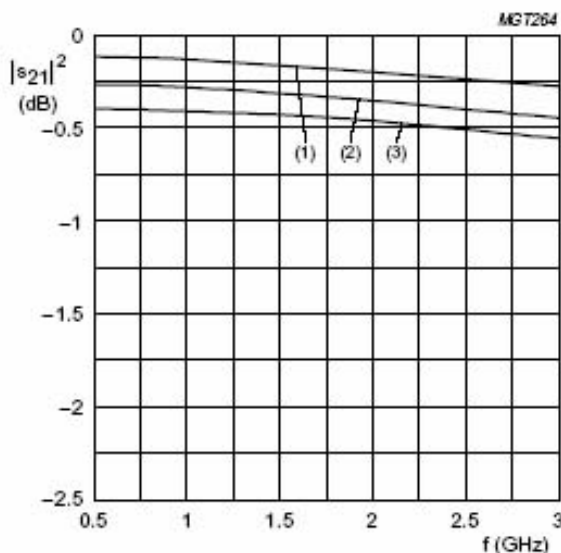
f = 100 MHz; T<sub>j</sub> = 25 °C.

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



f = 1 MHz; T<sub>j</sub> = 25 °C.

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

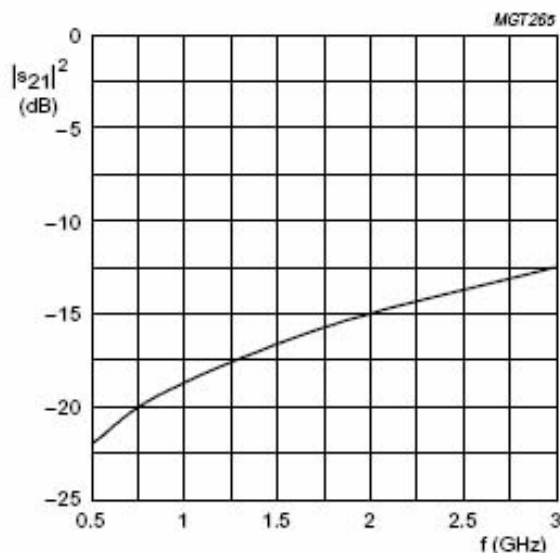


(1) I<sub>F</sub> = 10 mA. (2) I<sub>F</sub> = 1 mA. (3) I<sub>F</sub> = 0.5 mA.

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

T<sub>amb</sub> = 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<sub>amb</sub> = 25 °C.

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