

## Features

- Fast Switching Speed
- Low Leakage Current
- High Stability and High Reliability
- Low power losses, high efficiency



**RoHS**  
COMPLIANT



## Applications

- Electronic computer
- Pulse
- Switching circuit

**Marking: D4**

**SOD-323**

## Mechanical Data

- Package: SOD-323
- Lead Finish: Matte Tin
- UL Flammability Classification Rating 94V-0
- Case Material: "Green" Molding Compound.



### Maximum Ratings & Thermal Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

Parameters	Symbol	Value	Unit
Reverse Voltage	V <sub>R</sub>	75	V
Peak Reverse Voltage	V <sub>RM</sub>	85	V
Power Dissipation	P <sub>D</sub>	250	mW
Operating junction temperature	T <sub>J</sub>	150	°C
Storage temperature range	T <sub>STG</sub>	-55-+150	°C
Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	500	°C/W
Average Rectified Current	I <sub>O</sub>	250	mA
Non-repetitive Peak Forward Surge Current @t=1us	I <sub>FSM</sub>	4	A
@t=1ms		1	
@t=1s		0.5	

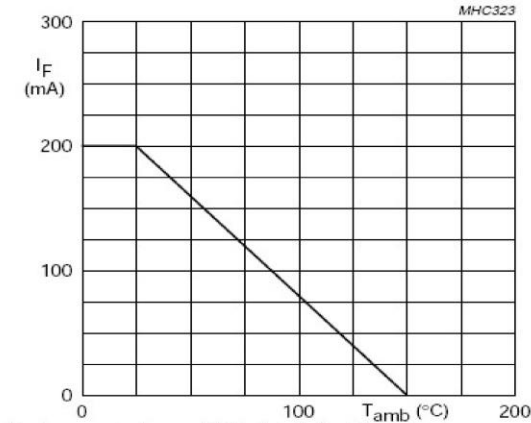
Valid provided that electrodes are kept at ambient temperature.

### Electrical Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

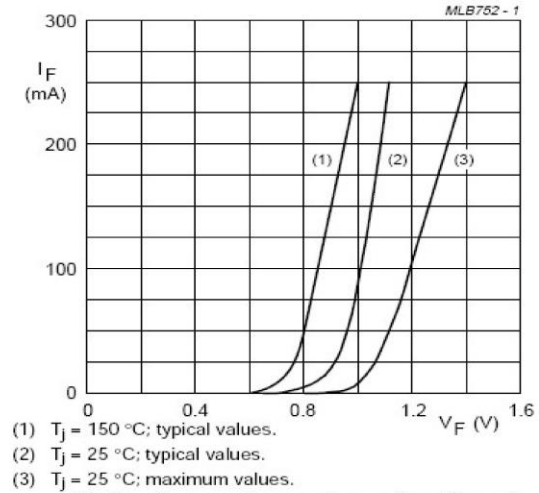
Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Reverse Breakdown Voltage	V <sub>(BR)R</sub>	IR=100uA	100		V
Reverse Leakage Current	I <sub>R</sub>	VR=75V		5	nA
		VR=75V Tj=150°C		0.5	uA
Forward Voltage	V <sub>F</sub>	IF=1mA		0.9	V
		IF=10mA		1.0	
		IF=50mA		1.1	
		IF=150mA		1.25	
Reverse Recovery Time	T <sub>RR</sub>	IF = 10mA IR= 10mA,		4	nS
		Irr=0.1mA			
		RL=100Ω			
Total Capacitance	C <sub>j</sub>	VR=0V, f=1MHZ	Typ 2		pF

## Ratings and Characteristics Curves

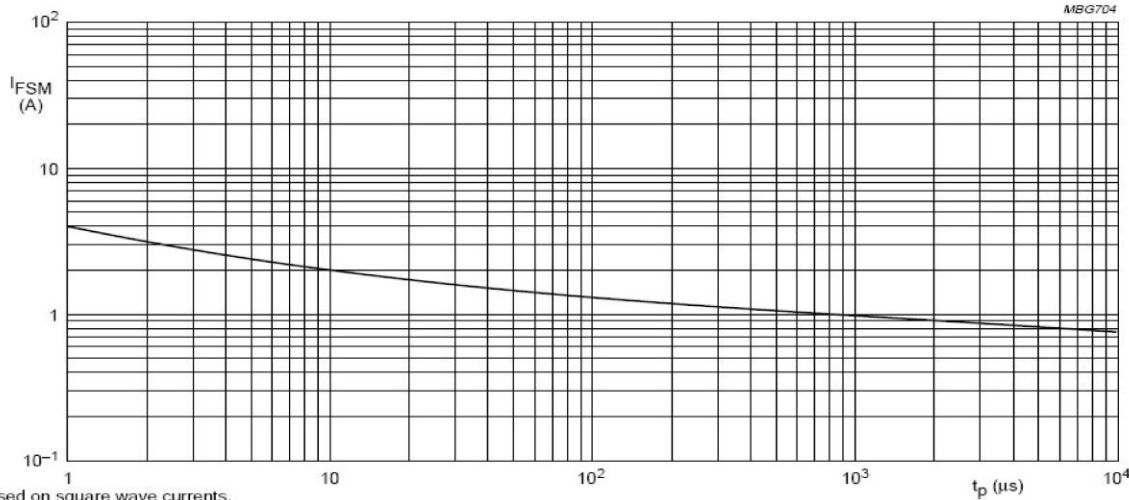
( $T_A = 25^\circ\text{C}$  unless otherwise noted)



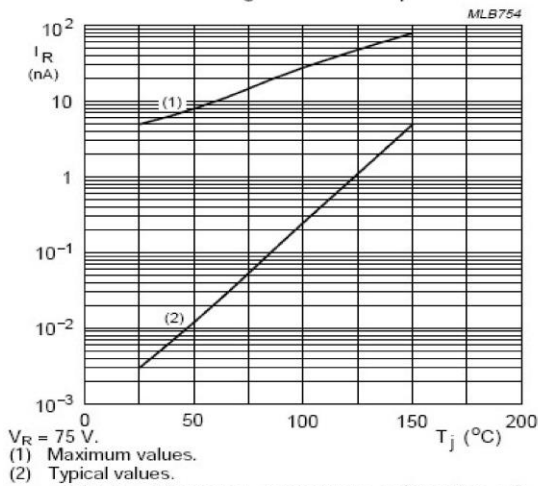
Device mounted on an FR4 printed-circuit board.  
**Fig.2** Maximum permissible continuous forward current as a function of ambient temperature.



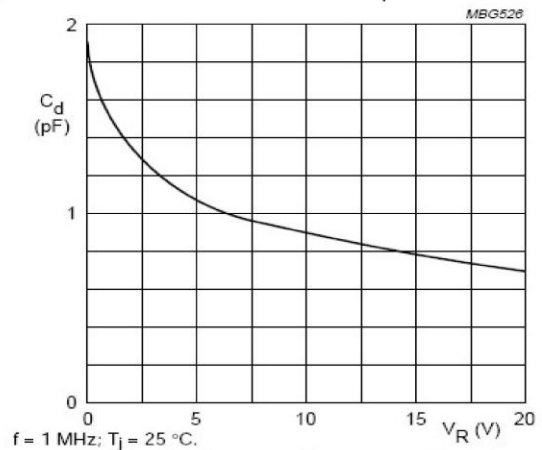
(1)  $T_j = 150^\circ\text{C}$ ; typical values.  
 (2)  $T_j = 25^\circ\text{C}$ ; typical values.  
 (3)  $T_j = 25^\circ\text{C}$ ; maximum values.  
**Fig.3** Forward current as a function of forward voltage.



Based on square wave currents.  
 $T_j = 25^\circ\text{C}$  prior to surge. **Fig.4** Maximum permissible non-repetitive peak forward current as a function of pulse duration.



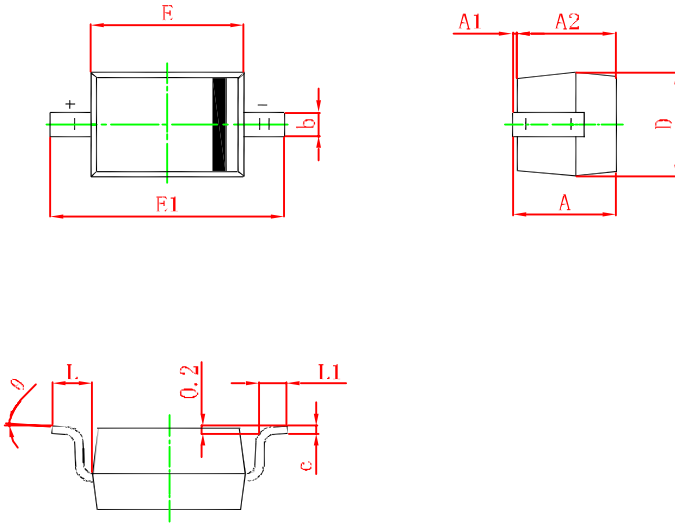
$V_R = 75\text{ V}$ .  
 (1) Maximum values.  
 (2) Typical values.  
**Fig.5** Reverse current as a function of junction temperature.



$f = 1\text{ MHz}$ ;  $T_j = 25^\circ\text{C}$ .  
**Fig.6** Diode capacitance as a function of reverse voltage; typical values.

## Package Outline Dimensions

millimeters



Symbol	Min	Max
A		1.000
A1	0.000	0.100
A2	0.800	0.900
b	0.250	0.350
c	0.080	0.150
D	1.200	1.400
E	1.600	1.800
E1	2.500	2.700
L	0.475REF	
L1	0.250	0.400
$\theta$	0°	8°

## Revision History

Document Version	Date of release	Description of changes
Rev.A	2015.01.01	First issue

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