BAS416

GOOD-ARKElectronics

Features

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

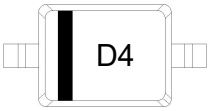
RoHS COMPLIANT

Marking: D4

SOD-323

Applications

- Electronic computer
- Pulse
- Switching circuit



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_A=25°C unless otherwise noted)

Parameters	Symbol	Value	Unit
Reverse Voltage	V_R	75	V
Peak Reverse Voltage	V_{RM}	85	V
Power Dissipation	P_D	250	mW
Operating junction temperature	T_J	150	℃
Storage temperature range	T_{STG}	-55-+150	℃
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500	℃/W
Average Rectified Current	I_O	250	mA
Non-repetitive Peak Forward Surge Current@t=1us @t=1ms @t=1s	I_{FSM}	4 1 0.5	A

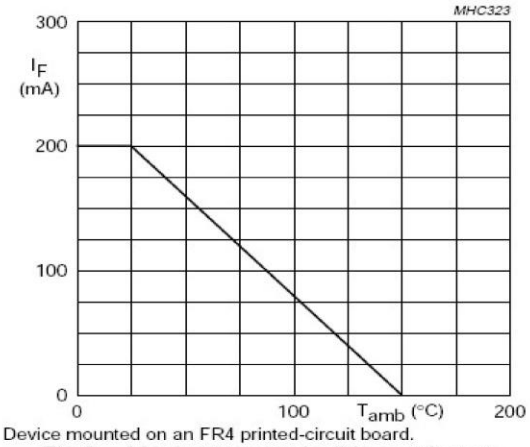
Valid provided that electrodes are kept at ambient temperature.

Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Reverse Breakdown Voltage	$V_{(BR)R}$	IR=100uA	100		V
Reverse Leakage Current	I_R	VR=75V		5	nA
		VR=75V Tj=150℃		0.5	uA
Forward Voltage	V_F	IF=1mA		0.9	V
		IF=10mA		1.0	
		IF=50mA		1.1	
		IF=150mA		1.25	
Reverse Recovery Time	T_{RR}	IF = 10mA IR= 10mA,		4	nS
		Irr=0.1mA			
		RL=100Ω			
Total Capacitance	C_j	VR=0V, f=1MHZ	Typ 2		pF

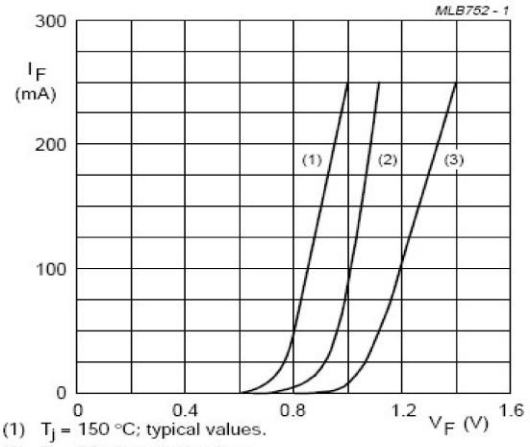
Ratings and Characteristics Curves

(T_A = 25℃ unless otherwise noted)



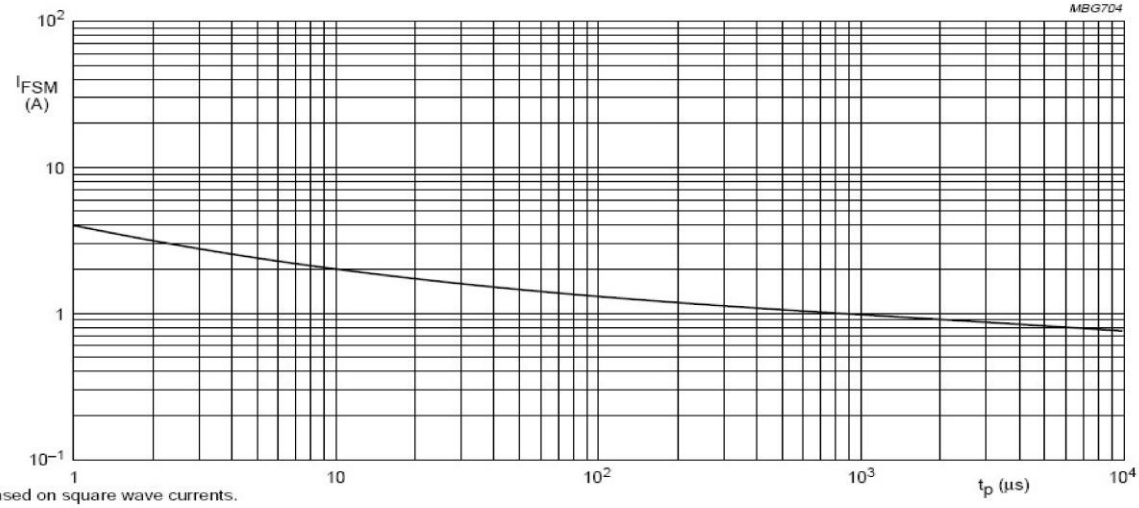
Device mounted on an FR4 printed-circuit board.

Fig.2 Maximum permissible continuous forward current as a function of ambient temperature.



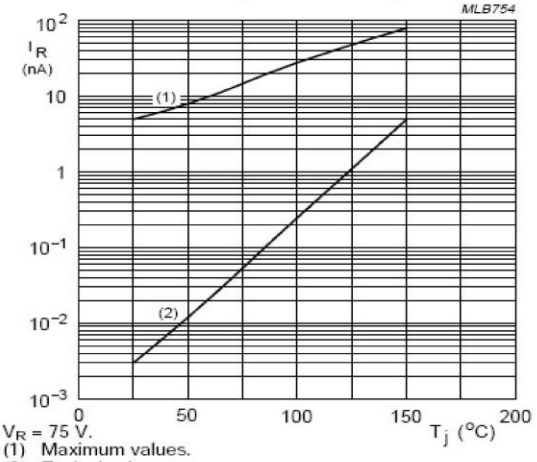
(1) T_j = 150 °C; typical values.
(2) T_j = 25 °C; typical values.
(3) T_j = 25 °C; maximum values.

Fig.3 Forward current as a function of forward voltage.



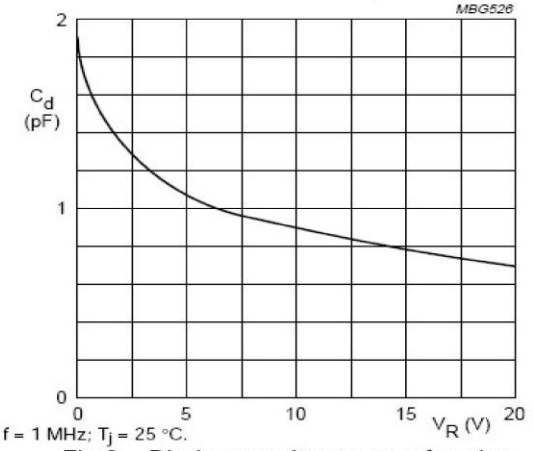
Based on square wave currents.
T_j = 25 °C prior to surge.

Fig.4 Maximum permissible non-repetitive peak forward current as a function of pulse duration.



V_R = 75 V.
(1) Maximum values.
(2) Typical values.

Fig.5 Reverse current as a function of junction temperature.

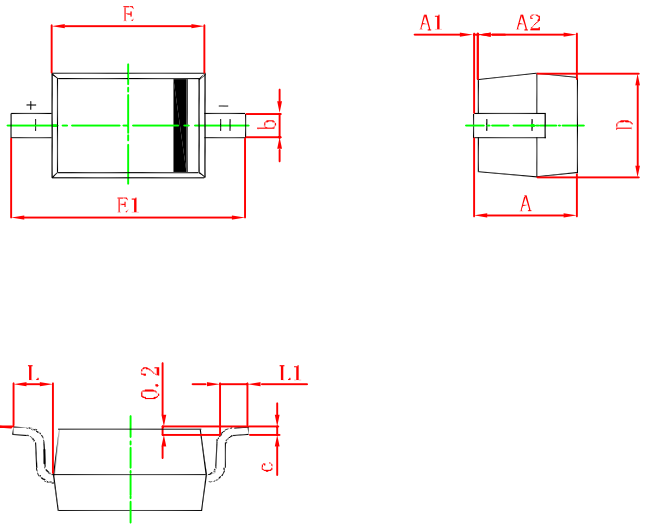


f = 1 MHz; T_j = 25 °C.

Fig.6 Diode capacitance as a function of reverse voltage; typical values.

Package Outline Dimensions

in inches (millimeters)



Symbol	Min.(mm)	Max.(mm)
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
θ	0°	8°

Revision History

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

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