Small plastic SMD package • Switching speed: max. 50 ns • General application

➢Continuous reverse voltage: max. 200 V

➢Repetitive peak reverse voltage: max. 250 V

➢Repetitive peak forward current: max. 625 mA.

APPLICATIONS

➢General purpose switching in e.g. surface mounted circuits.

Pinning

1.Cathode	2.Anode

SOD-323

Marking Code	
BAS321	A7

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 60134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{RRM}	repetitive peak reverse voltage		–	250	V
V_R	continuous reverse voltage		–	200	V
I_F	continuous forward current	see Fig.2; note 1	–	250	mA
I_{FRM}	repetitive peak forward current	t_p < 0.5 ms; $\delta \leqslant 0.25$	–	625	mA
I_{FSM}	non-repetitive peak forward current	square wave; T_j = 25 °C prior to surge; see Fig.4			
		t = 1 ∝s	–	9	A
		t = 100 ∝s t	–	3	A
		= 10 ms	–	1.7	A
P_{tot}	total power dissipation	T_{amb} = 25 °C; note 1	–	300	mW
T_{stg}	storage temperature		−65	+150	°C
T_j	junction temperature		–	150	°C

Note 1. Device mounted on an FR4 printed circuit-board.

CHARACTERISTICS

T_j = 25 °C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
V_F	forward voltage	see Fig.3		
		I_F = 100 mA	1	V
		I_F = 200 mA	1.25	V
I_R	reverse current	see Fig.5		
		V_R = 200 V	100	nA
		V_R = 200 V; T_j = 150 °C	100	∝A
C_d	diode capacitance	f = 1 MHz; V_R = 0; see Fig.6	2	pF
t_{rr}	reverse recovery time	when switched from I_F = 30 mA to I_R = 30 mA; R_L = 100 Ω; measured at I_R = 3 mA; see Fig.8	50	ns

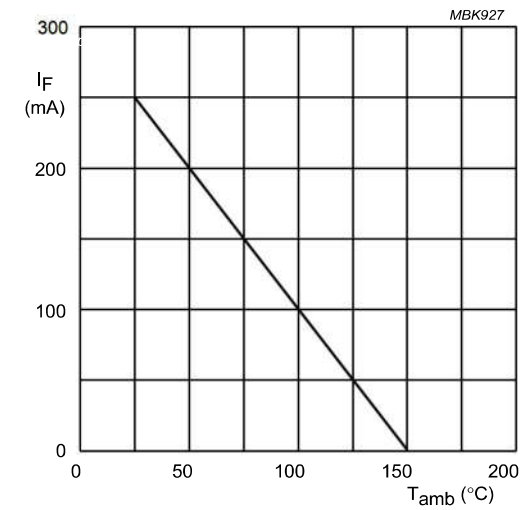
THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th(j-s)}$	thermal resistance from junction to soldering point	T_s = 90°C; note 1	130	K/W
$R_{th(j-a)}$	thermal resistance from junction to ambient	note 2	366	K/W

Notes 1. Soldering point of cathode tab.

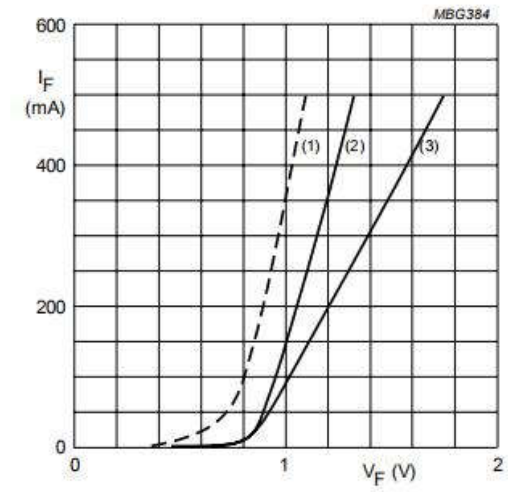
2. Device mounted on an FR4 printed circuit board.

GRAPHICAL DATA



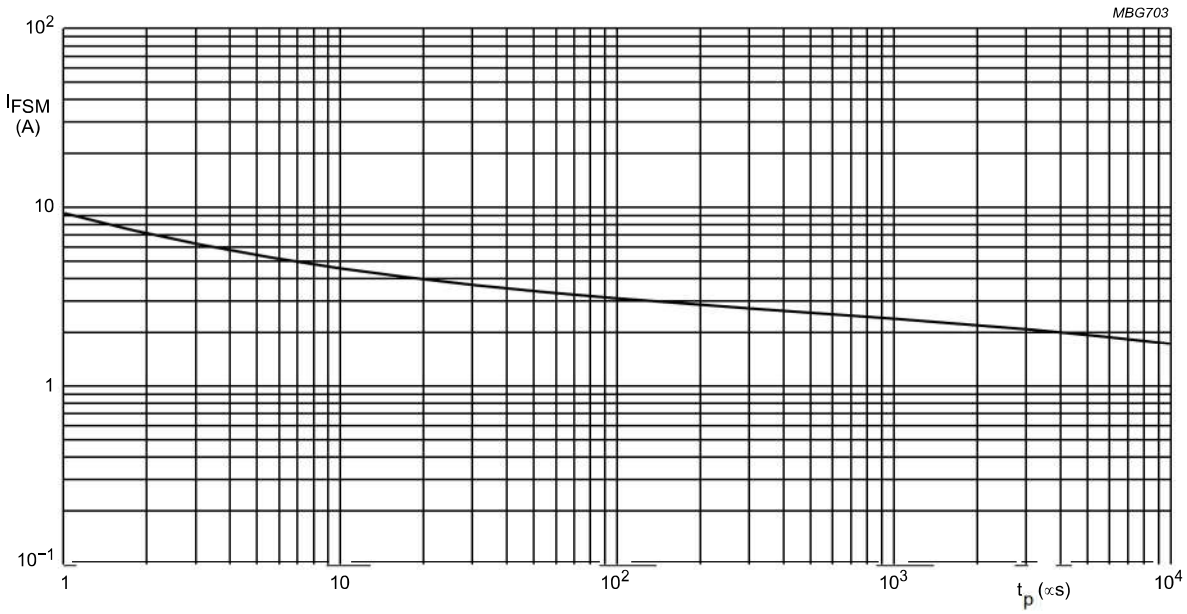
Device mounted on an FR4 printed-circuit board.

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.

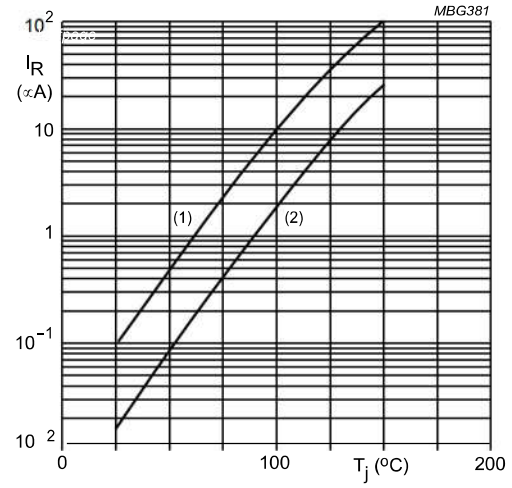
Fig.3 Forward current as a function of forward voltage.



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

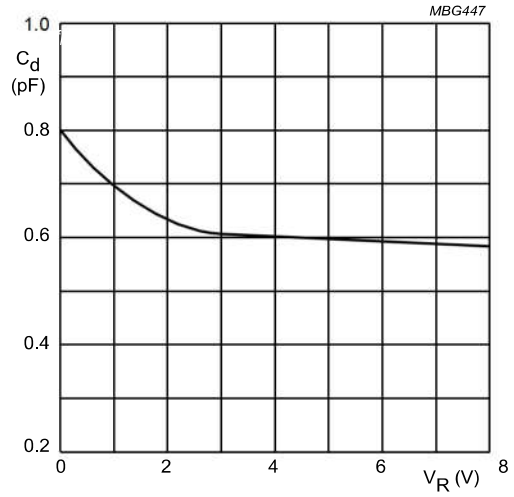
Fig.4 Maximum permissible non-repetitive peak forward current as a function of pulse duration.

GRAPHICAL DATA



(1) $V_R = V_{Rmax}$; maximum values.
(2) $V_R = V_{Rmax}$; 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.

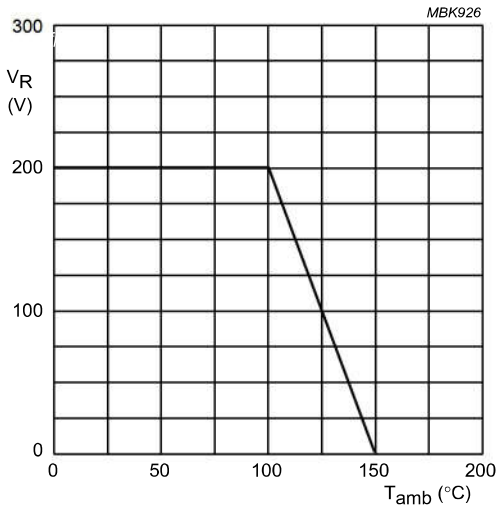


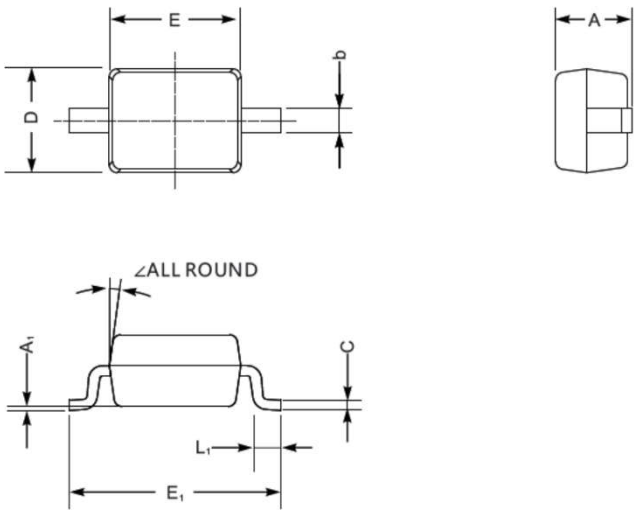
Fig.7 Maximum permissible continuous reverse voltage as a function of the ambient temperature.

Ordering information

Package	Packing Description	Packing Quantity
SOD-323	Tape/Reel,7"reel	3000PCS/Reel 120000PCS/Carton

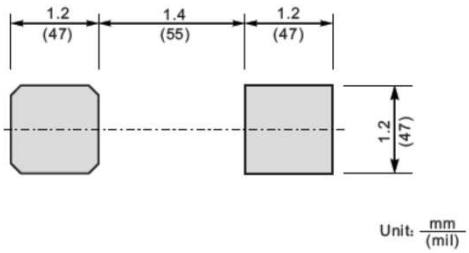
Package Dimensions

SOD-323



Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	0.8	1.1	32	43
C	0.08	0.15	3.1	5.9
D	1.2	1.4	47	55
E	1.4	1.8	63	70
E1	2.55	2.75	100	108
b	0.25	0.4	9.8	16
L1	0.2	0.45	7.9	16
A1	-	0.2	-	8
∠	9°			

The recommended mounting pad size



Disclaimer

The information presented in this document is for reference only. GuangDong Youfeng Microelectronics Co.,Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise. The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices),YFW or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale. This publication supersedes & replaces all information previously supplied. For additional information, please visit our website https://www.yfwdiode.com, or consult YFW sales office for further assistance.