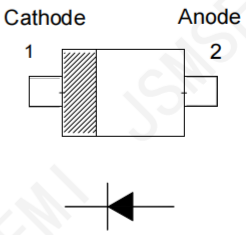
FEATURES

- Plastic SMD package
- Low leakage current: typ. 3 pA
- Switching time: typ. 0.8 µs
- Continuous reverse voltage: max. 75 V



SOD-323

APPLICATION

- Low-leakage current applications in surface mounted circuits.

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
Per diode					
V_{RRM}	repetitive peak reverse voltage		–	85	V
V_R	continuous reverse voltage		–	75	V
I_F	continuous forward current	single diode loaded; note 1; see Fig.2	–	160	mA
		double diode loaded; note 1; see Fig.2	–	140	mA
I_{FRM}	repetitive peak forward current		–	500	mA
I_{FSM}	non-repetitive peak forward current	square wave; T_j = 25 °C prior to surge; see Fig.4 t_p = 1 µs t_p = 1 ms t_p = 1 s	——	 4 1 0.5	 A A A
P_{tot}	total power dissipation	T_{amb} = 25 °C; note 1	–	250	mW
T_{stg}	storage temperature		–65	+150	°C
T_j	junction temperature		–	150	°C

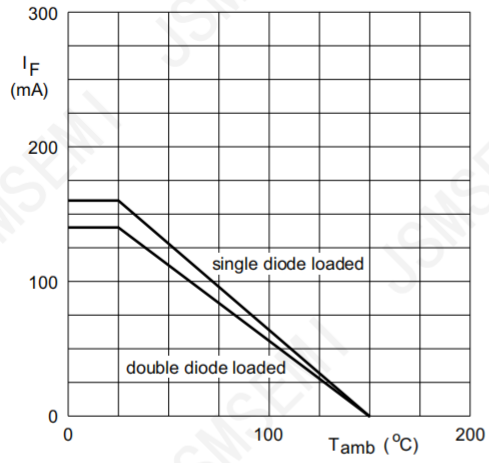
ELECTRICAL CHARACTERISTICS T_j = 25 °C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	TYP.	MAX.	UNIT
Per diode					
V_F	forward voltage	see Fig.3 I_F = 1 mA I_F = 10 mA I_F = 50 mA I_F = 150 mA	 – – – –	 900 1000 1100 1250	 mV mV mV mV
I_R	reverse current	see Fig.5 V_R = 75 V V_R = 75 V; T_j = 150 °C	 0.003 3	 5 80	 nA 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 = 10 mA to I_R = 10 mA; R_L = 100 Ω; measured at I_R = 1 mA; see Fig.7	0.8	3	µs

Note

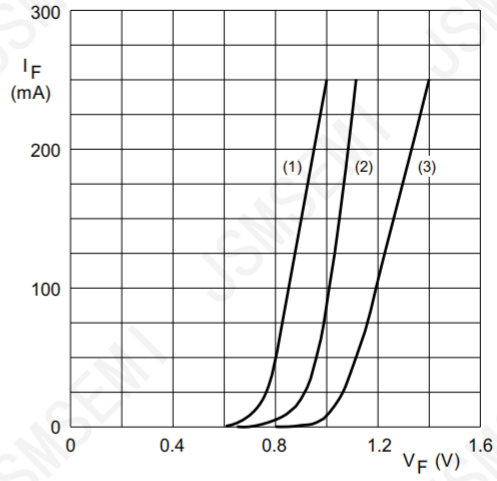
1. Device mounted on a FR4 printed-circuit board.

Typical Characteristics



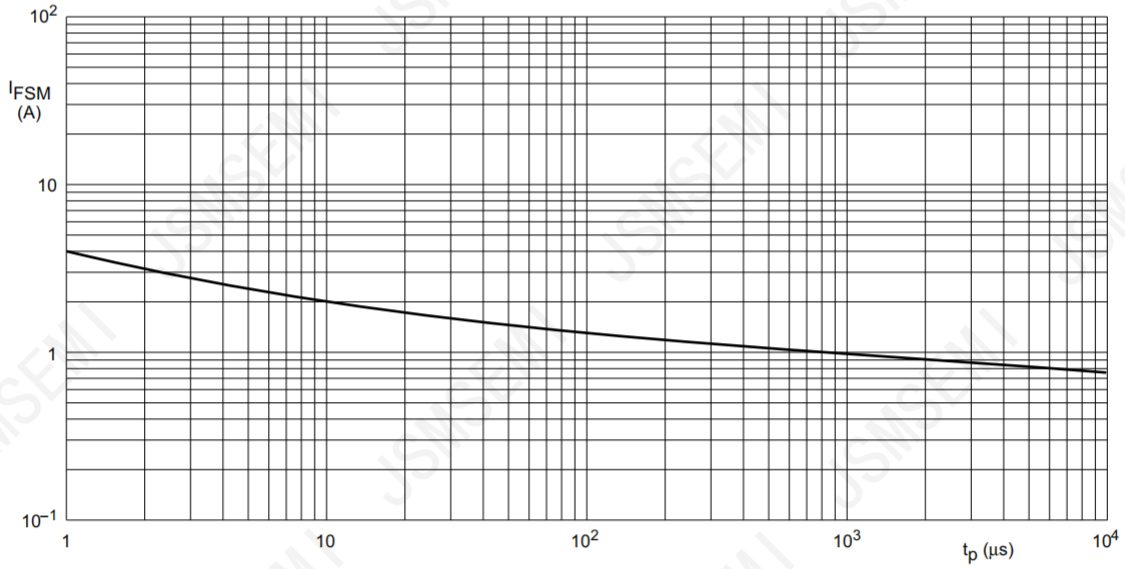
Device mounted on a FR4 printed-circuit board.

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.

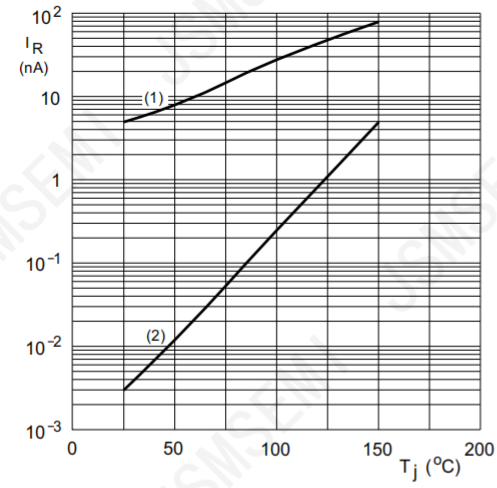
Fig.3 Forward current as a function of forward voltage; per diode.



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

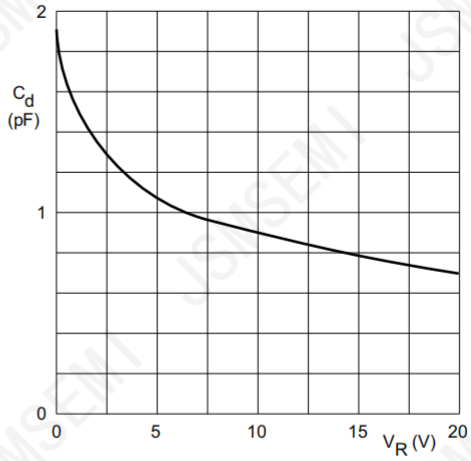
Fig.4 Maximum permissible non-repetitive peak forward current as a function of pulse duration per diode.

Typical Characteristics



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

Fig.5 Reverse current as a function of junction temperature; per diode.

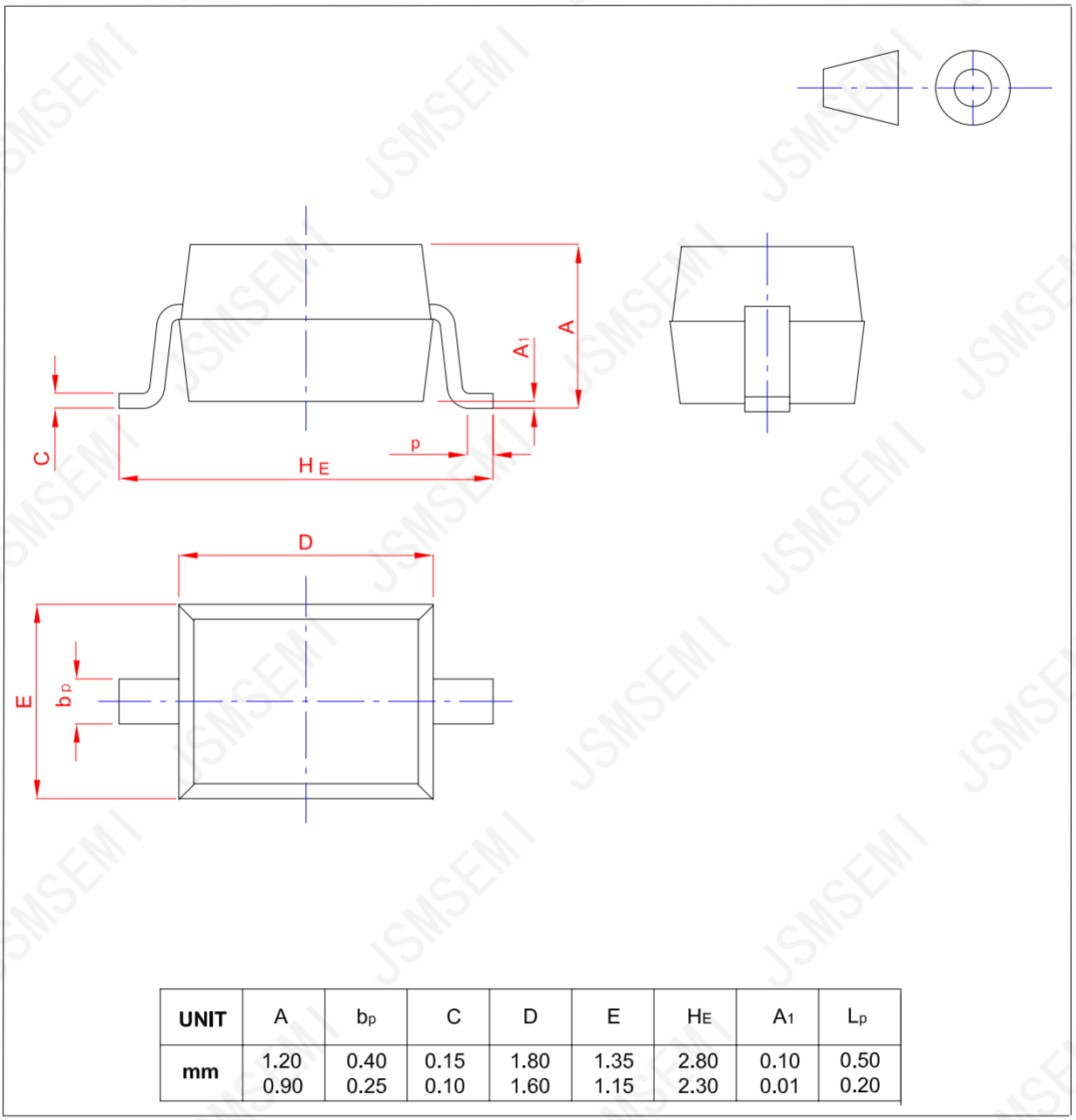


f = 1 MHz; T_j = 25 °C.

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

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads **SOD-323**



UNIT	A	bp	C	D	E	HE	A1	Lp
mm	1.20 0.90	0.40 0.25	0.15 0.10	1.80 1.60	1.35 1.15	2.80 2.30	0.10 0.01	0.50 0.20

Revision History

Rev.	Change	Date
V1.0	Initial version	2/23/2024

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