

DATA SHEET



PMEG2010EA Low V_F (MEGA) Schottky barrier diode

Product specification
Supersedes data of 2002 Dec 10

2004 Feb 06

Low V_F (MEGA) Schottky barrier diode

PMEG2010EA

FEATURES

- Forward current: 1 A
- Reverse voltage: 20 V
- Ultra high-speed switching
- Very low forward voltage
- Very small plastic SMD package.

APPLICATIONS

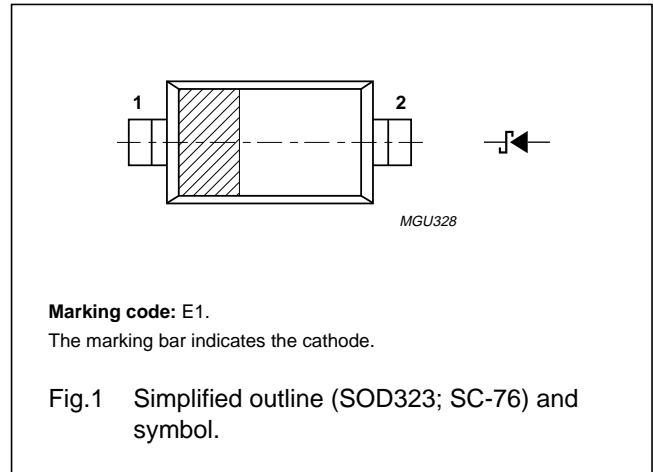
- Ultra high-speed switching
- Voltage clamping
- Protection circuits.

DESCRIPTION

Planar Maximum Efficiency General Application (MEGA) Schottky barrier diode with an integrated guard ring for stress protection, encapsulated in a SOD323 (SC-76) very small SMD plastic package.

PINNING

PIN	DESCRIPTION
1	cathode
2	anode



ORDERING INFORMATION

TYPE NUMBER	PACKAGE		
	NAME	DESCRIPTION	VERSION
PMEG2010EA	–	plastic surface mounted package; 2 leads	SOD323

LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_R	continuous reverse voltage		–	20	V
I_F	continuous forward current		–	1	A
I_{FSM}	non-repetitive peak forward current	$t_p = 8.3$ ms half sinewave; JEDEC method	–	5	A
T_{stg}	storage temperature		–65	+150	°C
T_j	junction temperature		–	125	°C
T_{amb}	operating ambient temperature		–65	+125	°C

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CHARACTERISTICS

$T_{amb} = 25\text{ °C}$ unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	TYP.	MAX.	UNIT
V_F	continuous forward voltage	see Fig.2; note 1 $I_F = 10\text{ mA}$ $I_F = 100\text{ mA}$ $I_F = 1000\text{ mA}$	240 300 480	270 350 550	mV mV mV
I_R	continuous reverse current	see Fig.3; note 1 $V_R = 5\text{ V}$ $V_R = 8\text{ V}$ $V_R = 15\text{ V}$	5 7 10	10 20 50	μA μA μA
C_d	diode capacitance	$V_R = 5\text{ V}$; $f = 1\text{ MHz}$; see Fig.4	19	25	pF

Note

1. Pulsed test: $t_p = 300\text{ }\mu\text{s}$; $\delta = 0.02$.

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th(j-a)}$	thermal resistance from junction to ambient	note 1	220	K/W
		note 2	180	K/W

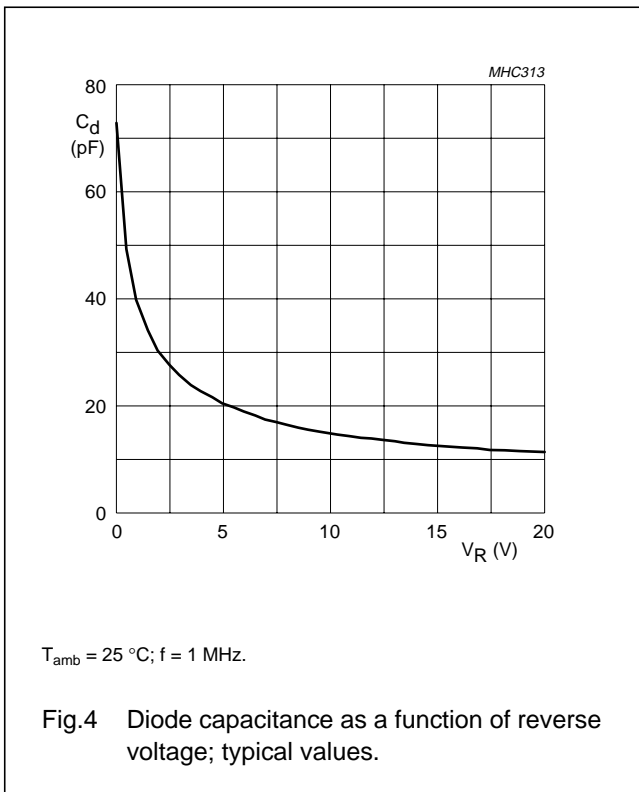
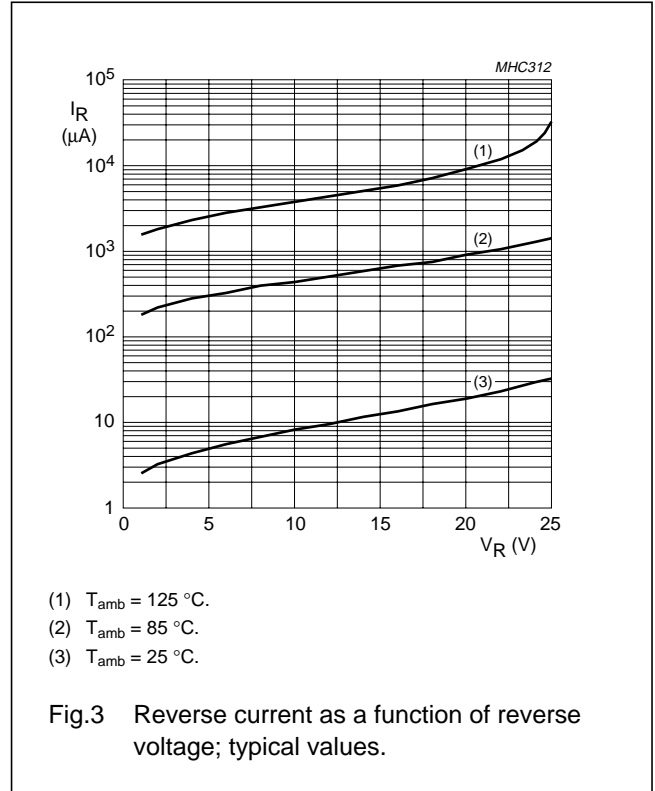
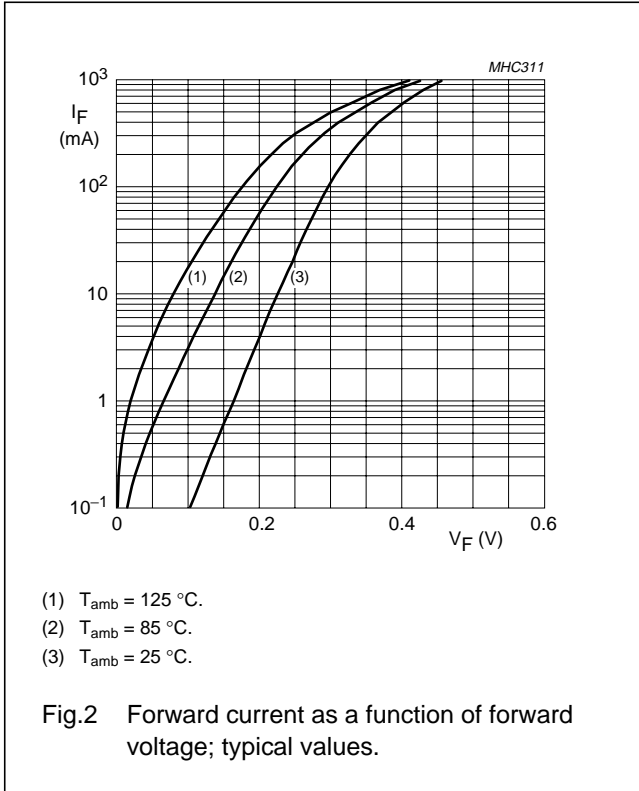
Notes

1. Device mounted on an FR4 printed-circuit board with Cu clad 10 x 10 mm.
2. Device mounted on an FR4 printed-circuit board with Cu clad 40 x 40 mm.

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GRAPHICAL DATA



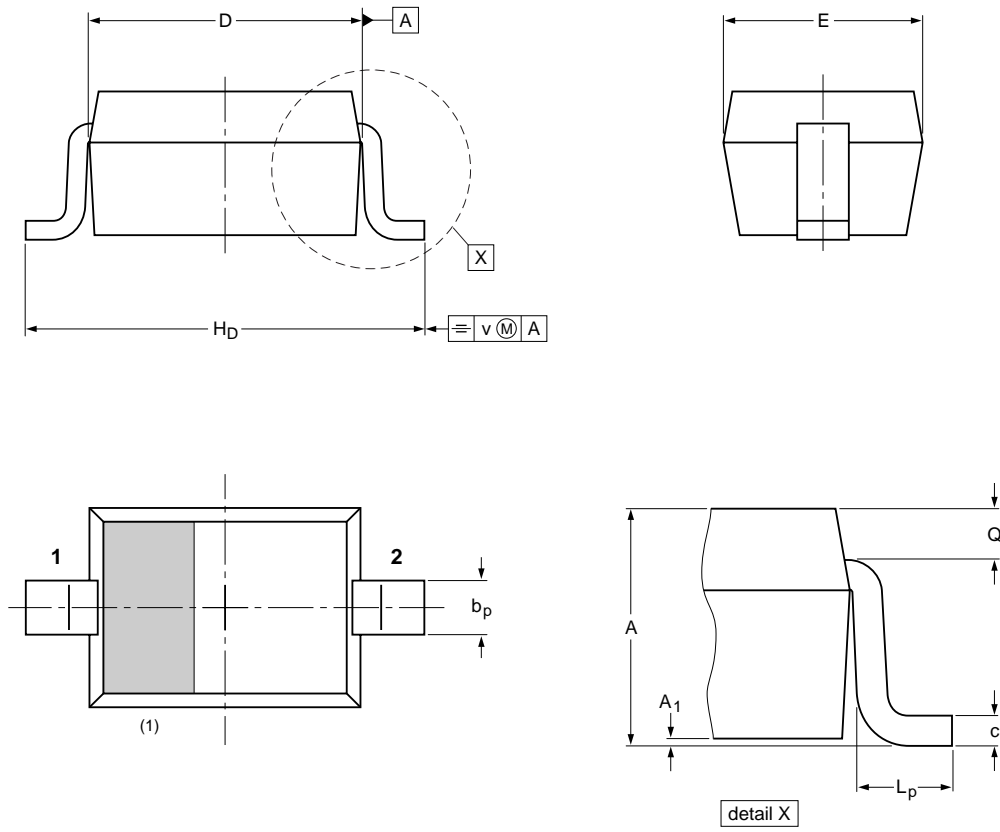
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PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD323



DIMENSIONS (mm are the original dimensions)

UNIT	A	A _{1 max}	b _p	c	D	E	H _D	L _p	Q	v
mm	1.1 0.8	0.05	0.40 0.25	0.25 0.10	1.8 1.6	1.35 1.15	2.7 2.3	0.45 0.15	0.25 0.15	0.2

Note

1. The marking bar indicates the cathode

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	JEITA			
SOD323			SC-76			99-09-13 03-12-17

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DATA SHEET STATUS

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