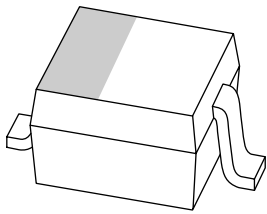


# DATA SHEET



## **PMEG2010EA** Low $V_F$ (MEGA) Schottky barrier diode

Product data sheet  
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

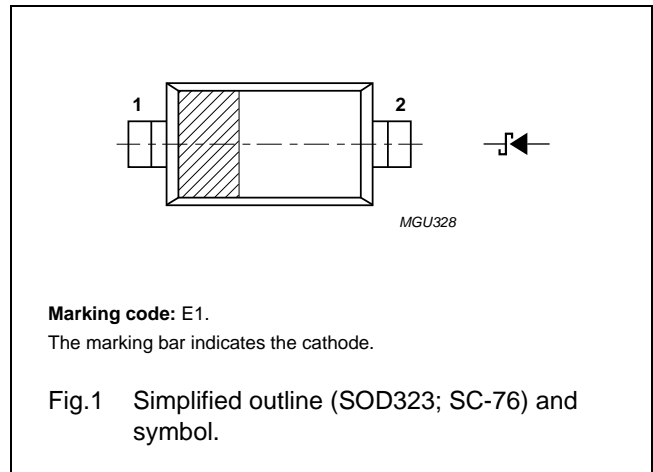
- Ultra high-speed switching
- Voltage clamping
- Protection circuits.

### 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

Low  $V_F$  (MEGA) Schottky barrier diode

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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	$\mu\text{A}$ $\mu\text{A}$ $\mu\text{A}$
$C_d$	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

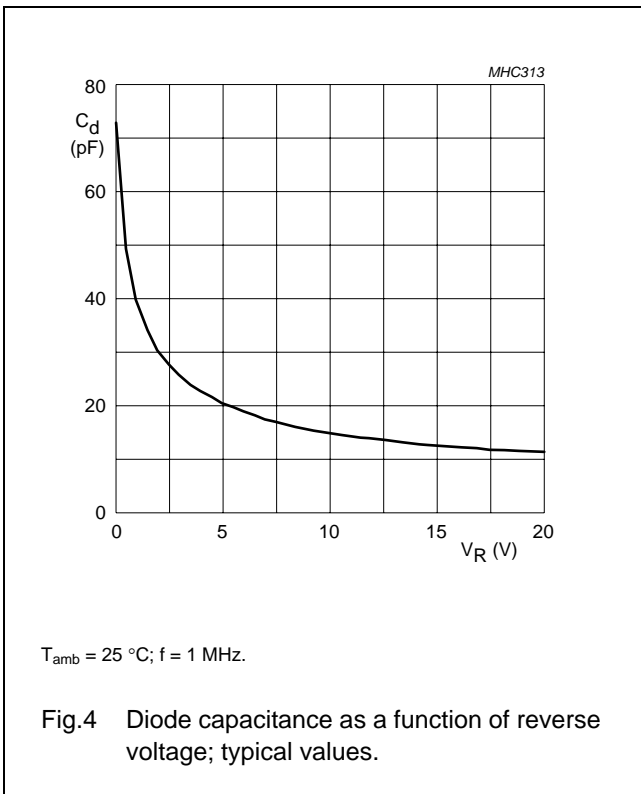
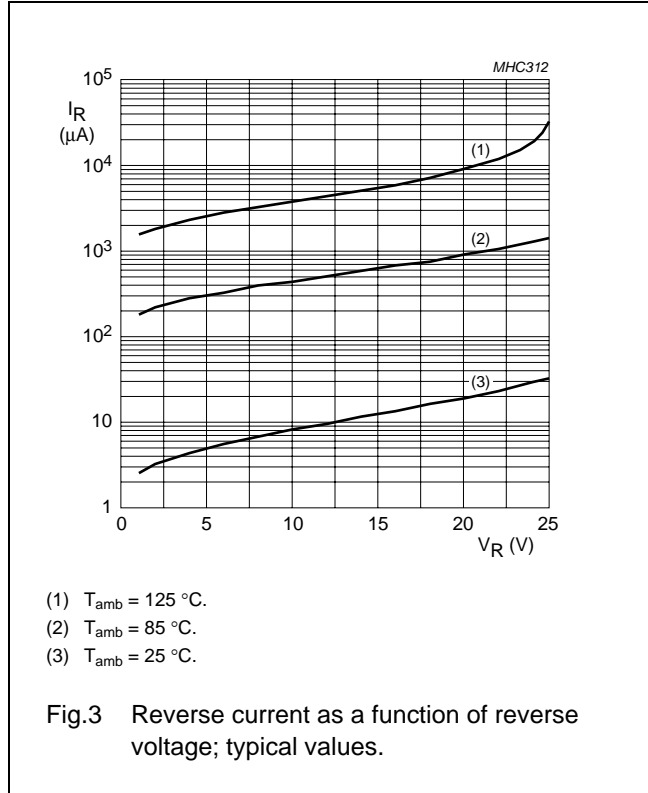
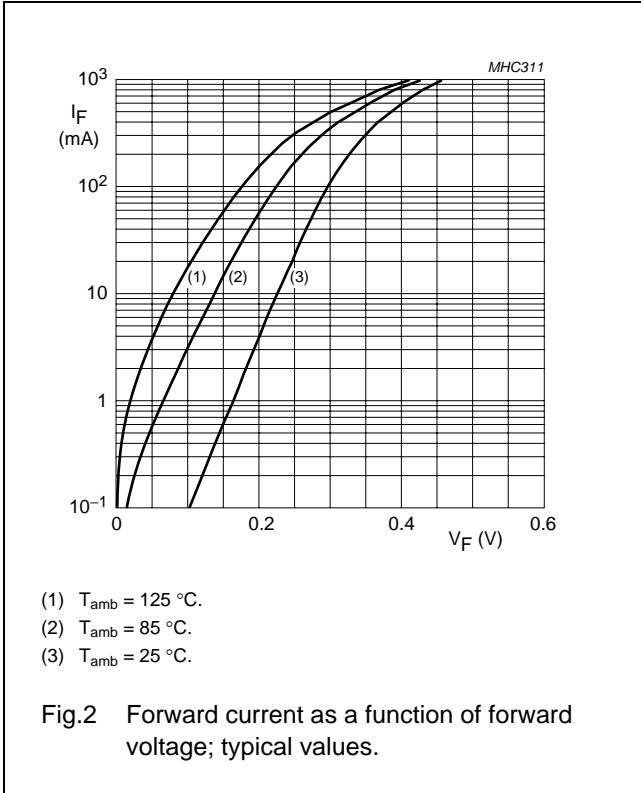
**Notes**

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



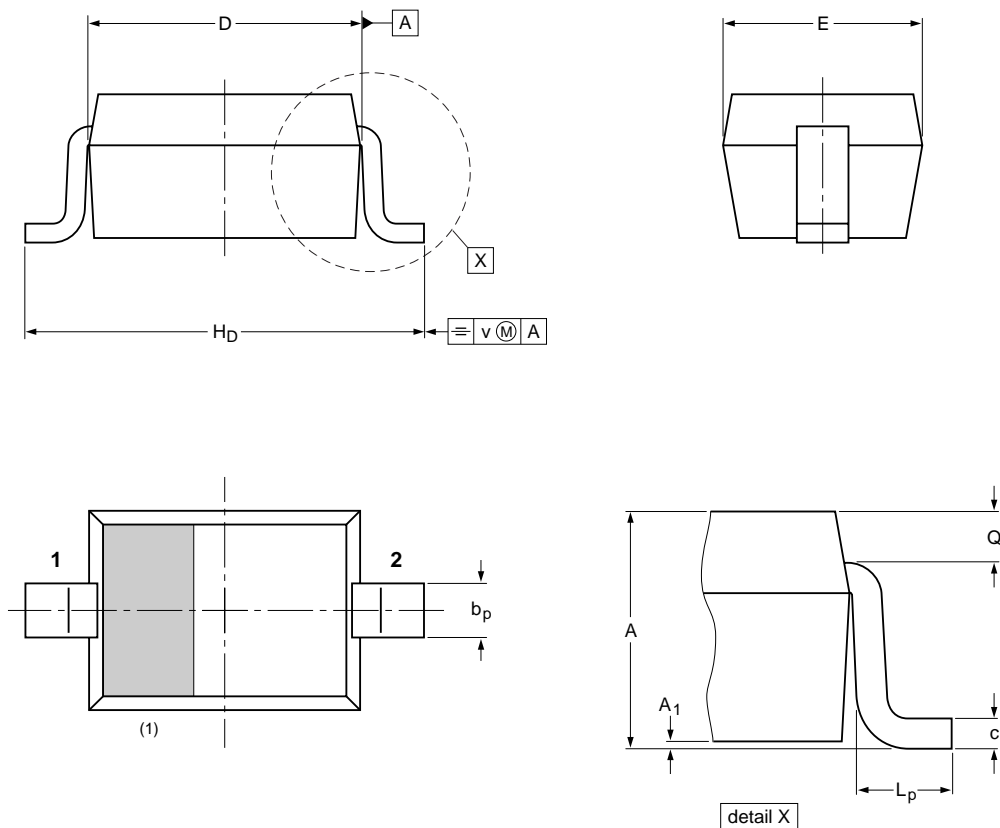
Low  $V_F$  (MEGA) Schottky barrier diode

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PACKAGE OUTLINE

Plastic surface-mounted package; 2 leads

SOD323



DIMENSIONS (mm are the original dimensions)

UNIT	A	A <sub>1</sub> max	b <sub>p</sub>	c	D	E	H <sub>D</sub>	L <sub>p</sub>	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		<del>03-12-17</del> 06-03-16

Low  $V_F$  (MEGA) Schottky barrier diode

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**DATA SHEET STATUS**

DOCUMENT STATUS <sup>(1)</sup>	PRODUCT STATUS <sup>(2)</sup>	DEFINITION
Objective data sheet	Development	This document contains data from the objective specification for product development.
Preliminary data sheet	Qualification	This document contains data from the preliminary specification.
Product data sheet	Production	This document contains the product specification.

**Notes**

1. Please consult the most recently issued document before initiating or completing a design.
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# ***NXP Semiconductors***

## **Customer notification**

This data sheet was changed to reflect the new company name NXP Semiconductors, including new legal definitions and disclaimers. No changes were made to the technical content, except for package outline drawings which were updated to the latest version.

## **Contact information**

For additional information please visit: <http://www.nxp.com>

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