

# DATA SHEET



## **PMEG2015EA** Low $V_F$ (MEGA) Schottky barrier diode

Product specification  
Supersedes data of 2003 May 20

2004 Feb 03

# Low $V_F$ (MEGA) Schottky barrier diode

# PMEG2015EA

## FEATURES

- Forward current: 1.5 A
- Reverse voltage: 20 V
- Ultra high-speed switching
- Very low forward voltage
- Very small plastic SMD package.

## APPLICATIONS

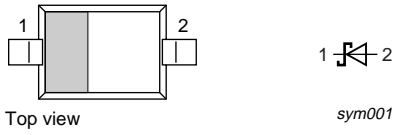
- Ultra high-speed switching
- Voltage clamping
- Protection circuits.

## 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



Top view

*sym001*

**Marking code:** S5.  
The marking bar indicates the cathode.

Fig.1 Simplified outline (SOD323; SC-76) and symbol.

## ORDERING INFORMATION

TYPE NUMBER	PACKAGE		
	NAME	DESCRIPTION	VERSION
PMEG2015EA	–	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	$T_s < 55\text{ °C}$	–	1.5	A
$I_{FSM}$	non-repetitive peak forward current	$t_p = 8\text{ ms square wave}$	–	10	A
$I_{FRM}$	repetitive peak forward current	$t_p = 1\text{ ms}; \delta = \leq 0.25$	–	4.5	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			
		$I_F = 10\text{ mA}$	240	270	mV
		$I_F = 100\text{ mA}$	300	350	mV
		$I_F = 1000\text{ mA}$	480	550	mV
		$I_F = 1500\text{ mA}$	560	660	mV
$I_R$	continuous reverse current	see Fig.3; note 1			
		$V_R = 5\text{ V}$	5	10	$\mu\text{A}$
		$V_R = 8\text{ V}$	7	20	$\mu\text{A}$
		$V_R = 15\text{ V}$	10	50	$\mu\text{A}$
$C_d$	diode capacitance	$V_R = 5\text{ V}$ ; $f = 1\text{ MHz}$ ; see Fig.4	19	25	pF

**Note**

1. Pulse 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	450	K/W
		note 2	210	K/W
$R_{th(j-s)}$	thermal resistance from junction to solder point	note 3	90	K/W

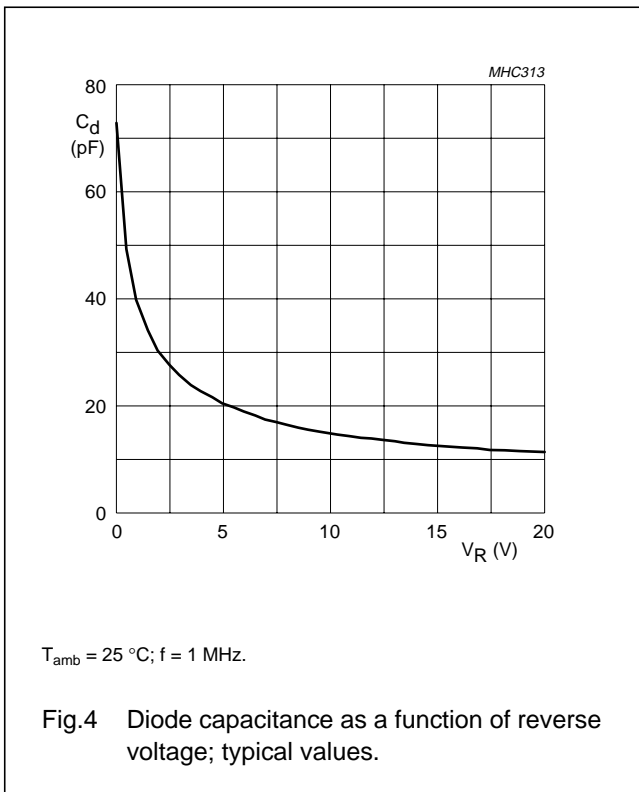
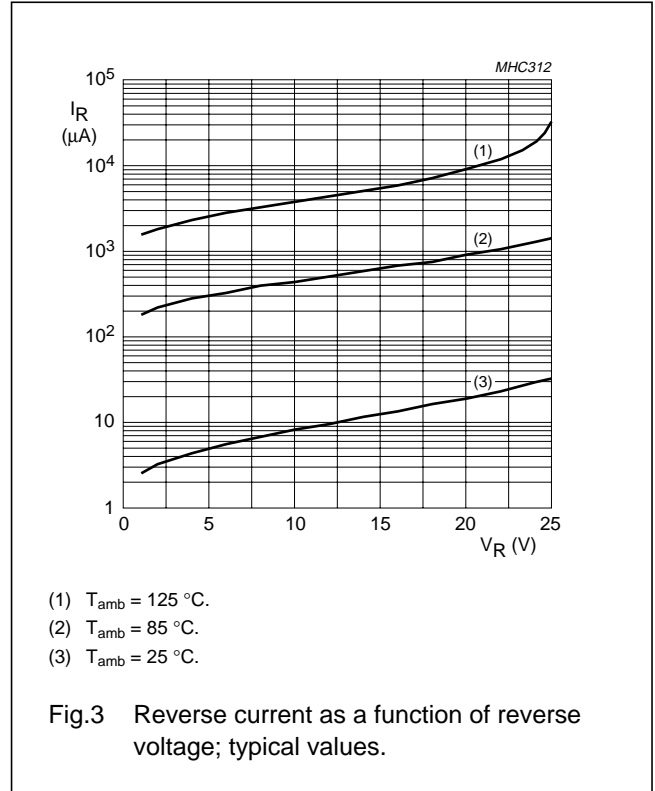
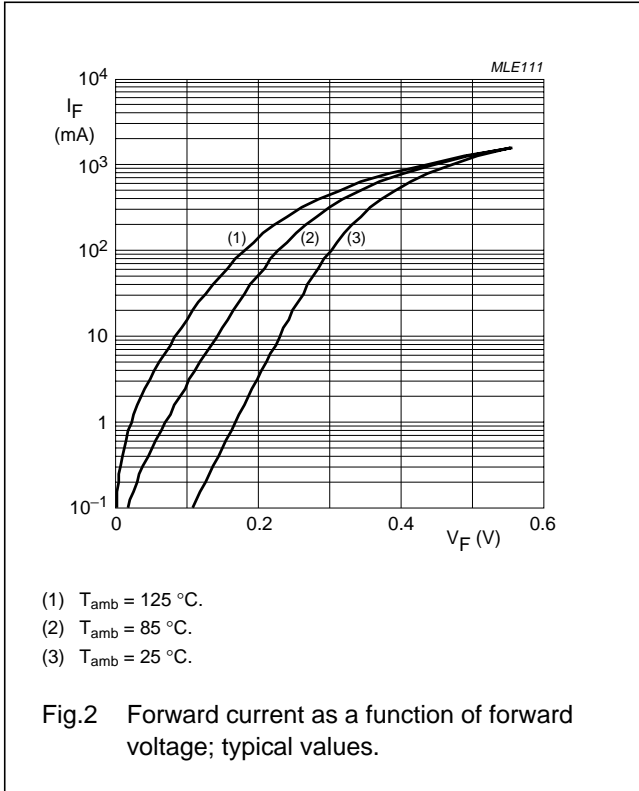
**Notes**

1. Refer to SC-76 (SOD323) standard mounting conditions.
2. Device mounted on a printed-circuit board with copper clad 10 x 10 mm.
3. Soldering point of cathode tab.

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GRAPHICAL DATA



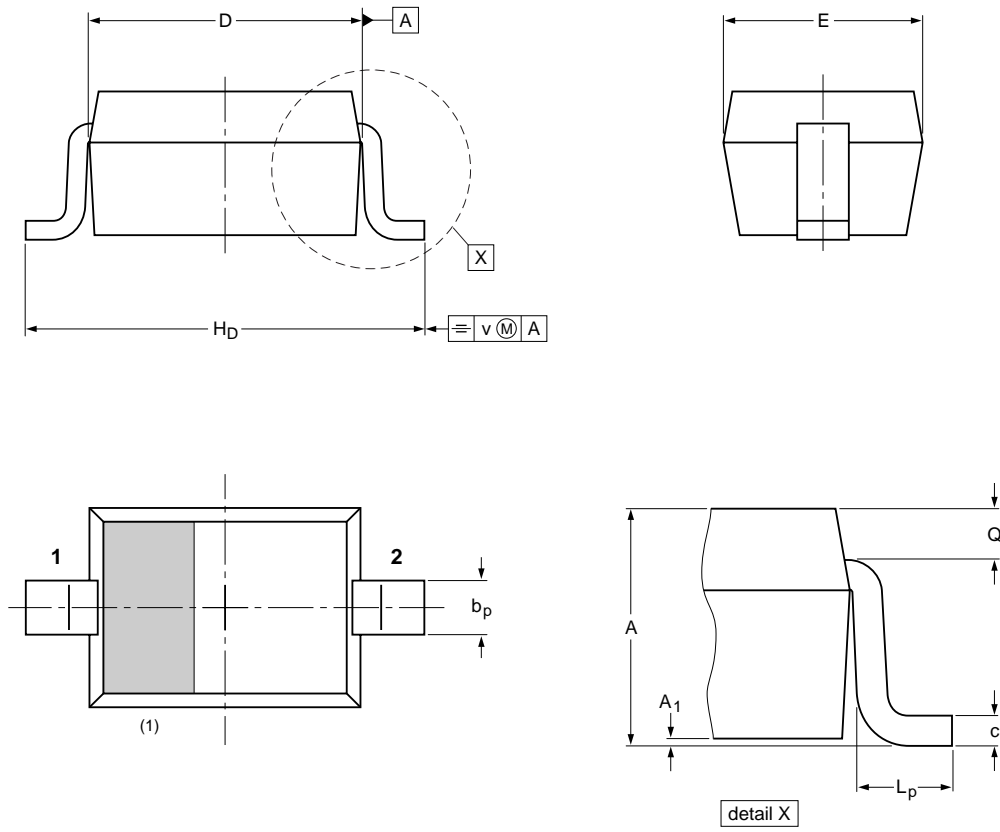
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PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD323



DIMENSIONS (mm are the original dimensions)

UNIT	A	A <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		99-09-13 03-12-17

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## DATA SHEET STATUS

LEVEL	DATA SHEET STATUS <sup>(1)</sup>	PRODUCT STATUS <sup>(2)(3)</sup>	DEFINITION
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