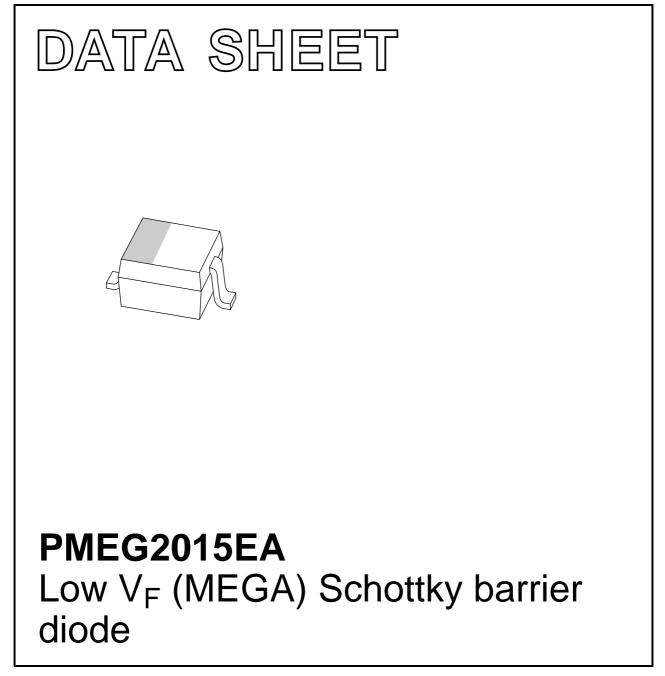
DISCRETE SEMICONDUCTORS



Product data sheet Supersedes data of 2003 May 20 2004 Feb 03



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.

ORDERING INFORMATION

TYPE NUMBER		PACKAGE		
TIPE NOMBER	NAME	DESCRIPTION	VERSION	
PMEG2015EA	_	plastic surface mounted package; 2 leads	SOD323	

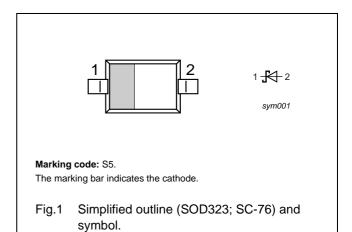
LIMITING VALUES

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 °C	-	1.5	А
I _{FSM}	non-repetitive peak forward current	t _p = 8 ms square wave	-	10	А
I _{FRM}	repetitive peak forward current	$t_p = 1 \text{ ms}; \delta = \le 0.25$	_	4.5	А
T _{stg}	storage temperature		-65	+150	°C
Tj	junction temperature		_	125	°C
T _{amb}	operating ambient temperature		-65	+125	°C

PINNING

PIN	DESCRIPTION
1	cathode
2	anode



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CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	TYP.	MAX.	UNIT
V _F	continuous forward voltage	see Fig.2; note 1			
		I _F = 10 mA	240	270	mV
		I _F = 100 mA	300	350	mV
		I _F = 1000 mA	480	550	mV
		I _F = 1500 mA	560	660	mV
I _R	continuous reverse current	see Fig.3; note 1			
		V _R = 5 V	5	10	μΑ
		V _R = 8 V	7	20	μΑ
		V _R = 15 V	10	50	μΑ
C _d	diode capacitance	V _R = 5 V; f = 1 MHz; see Fig.4	19	25	pF

Note

1. Pulse test: $t_p = 300 \ \mu s$; $\delta = 0.02$.

THERMAL CHARACTERISTICS

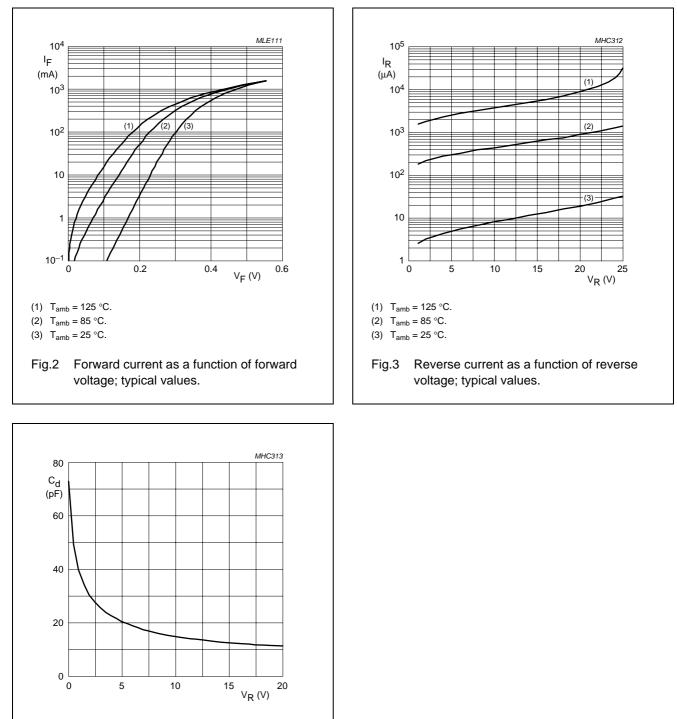
SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
R _{th(j-a)}	thermal resistance from junction to ambient	note 1	450	K/W
		note 2	210	K/W
R _{th(j-s)}	thermal resistance from junction to solder point	note 3	90	K/W

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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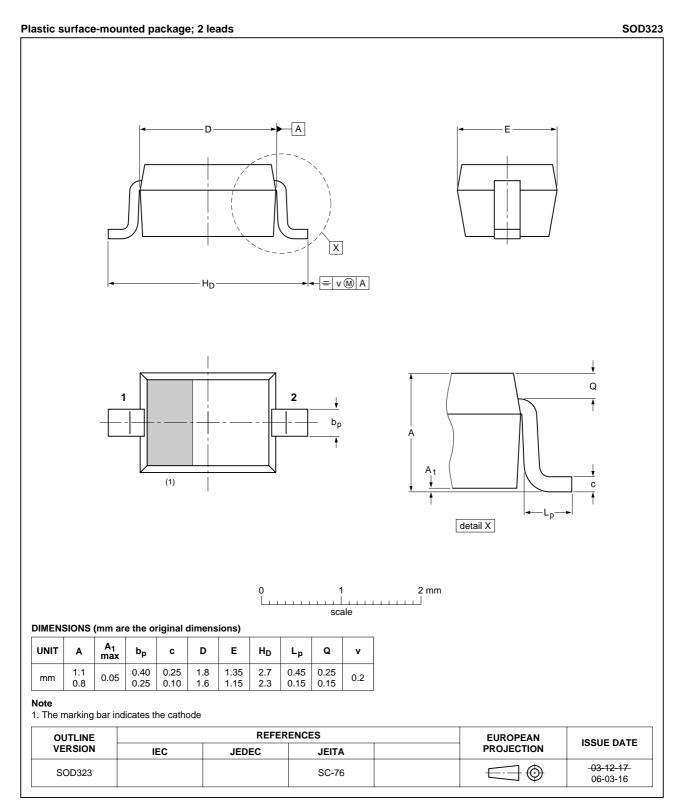
GRAPHICAL DATA



 $T_{amb} = 25 \ ^{\circ}C$; f = 1 MHz.

Fig.4 Diode capacitance as a function of reverse voltage; typical values.

PACKAGE OUTLINE



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DATA SHEET STATUS

DOCUMENT STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾	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.
- The product status of device(s) described in this document may have changed since this document was published and may differ in case of multiple devices. The latest product status information is available on the Internet at URL http://www.nxp.com.

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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

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