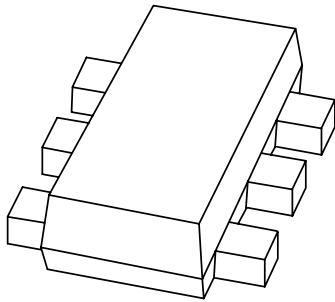


# DATA SHEET



## **PMEG2015EV**

Low  $V_F$  MEGA Schottky barrier diode

Product data sheet  
Supersedes data of 2003 May 21

2003 Jun 03

# Low $V_F$ MEGA Schottky barrier diode

## PMEG2015EV

### FEATURES

- Forward current: 1.5 A
- Reverse voltage: 20 V
- Very low forward voltage
- Ultra small plastic SMD package
- Flat leads: excellent coplanarity and improved thermal behaviour.

### APPLICATIONS

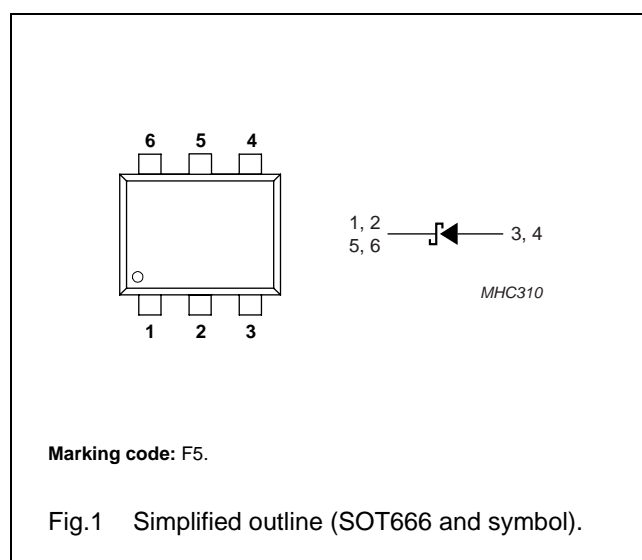
- Low voltage rectification
- High efficiency DC-DC conversion
- Switch mode power supply
- Inverse polarity protection
- Low power consumption applications.

### DESCRIPTION

Planar Maximum Efficiency General Application (MEGA) Schottky barrier diode with an integrated guard ring for stress protection, encapsulated in a SOT666 ultra small SMD plastic package.

### PINNING

PIN	DESCRIPTION
1	cathode
2	cathode
3	anode
4	anode
5	cathode
6	cathode



### 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; note 1	–	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		–	150	°C
$T_{amb}$	operating ambient temperature		–65	+125	°C

### Note

1. Only valid if pins 3 and 4 are connected in parallel.

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**ELECTRICAL CHARACTERISTICS**

$T_{amb} = 25\text{ }^{\circ}\text{C}$  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
		$I_F = 1500\text{ mA}$	530	660	mV
$I_R$	continuous reverse current	see Fig.3; note 2			
		$V_R = 5\text{ V}$	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

**Notes**

- Only valid if pins 1, 2 and 5, 6 are soldered on  $1\text{ cm}^2$  copper solder land.
- 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	405	K/W
		note 2	215	K/W
$R_{th\ j-s}$	thermal resistance from junction to solder point	note 3	80	K/W

**Notes**

- Refer to SOT666 standard mounting conditions.
- Device mounted on a printed-circuit board, single-sided copper, tinplated, mounting pad for cathode  $1\text{ cm}^2$ .
- Soldering point of cathode tabs.

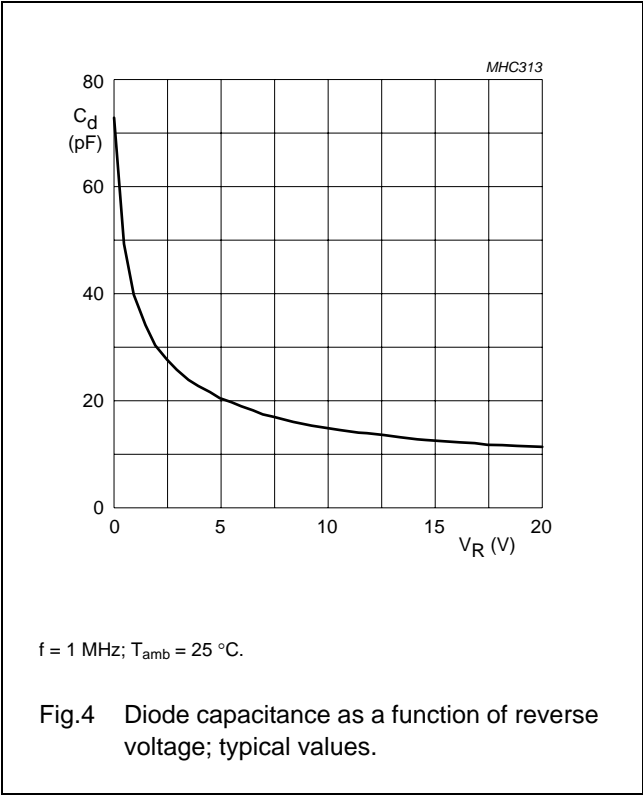
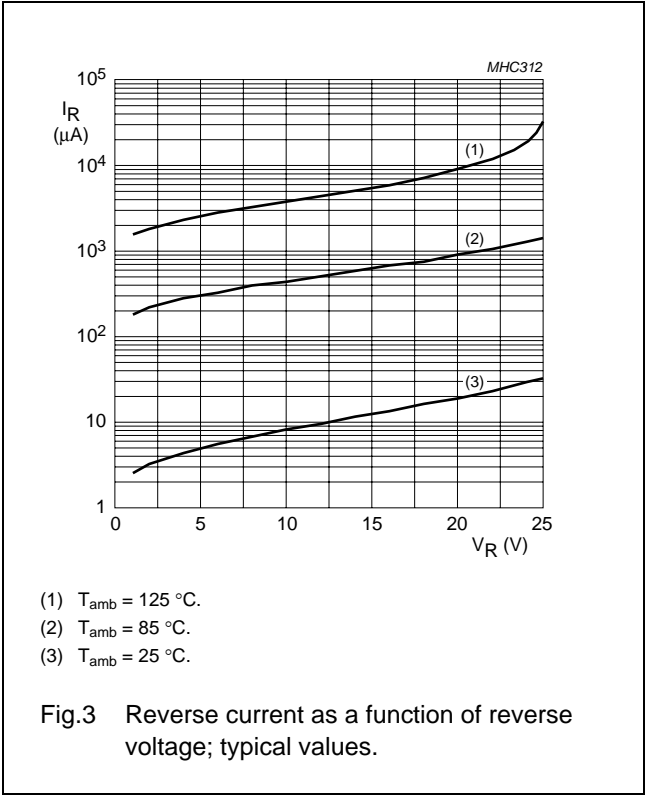
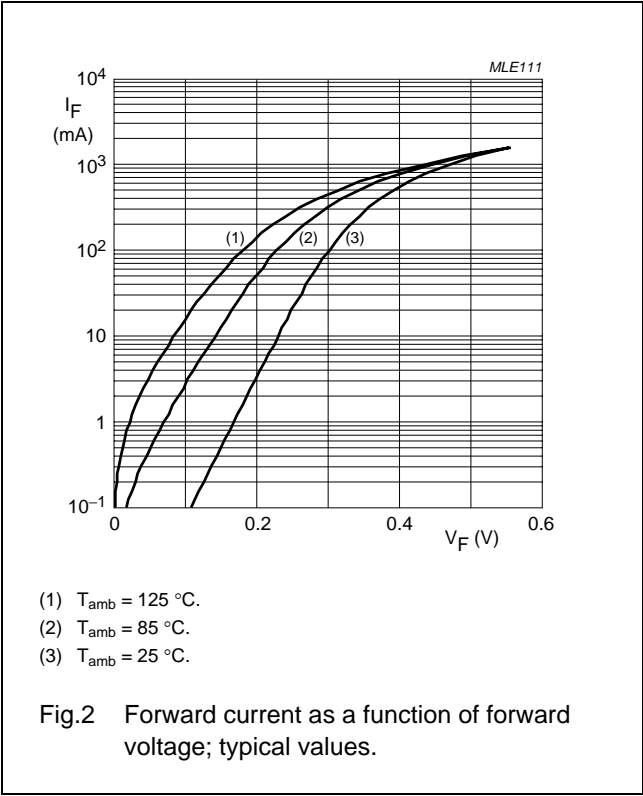
**Soldering**

Reflow soldering is the only recommended soldering method.

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GRAPHICAL DATA



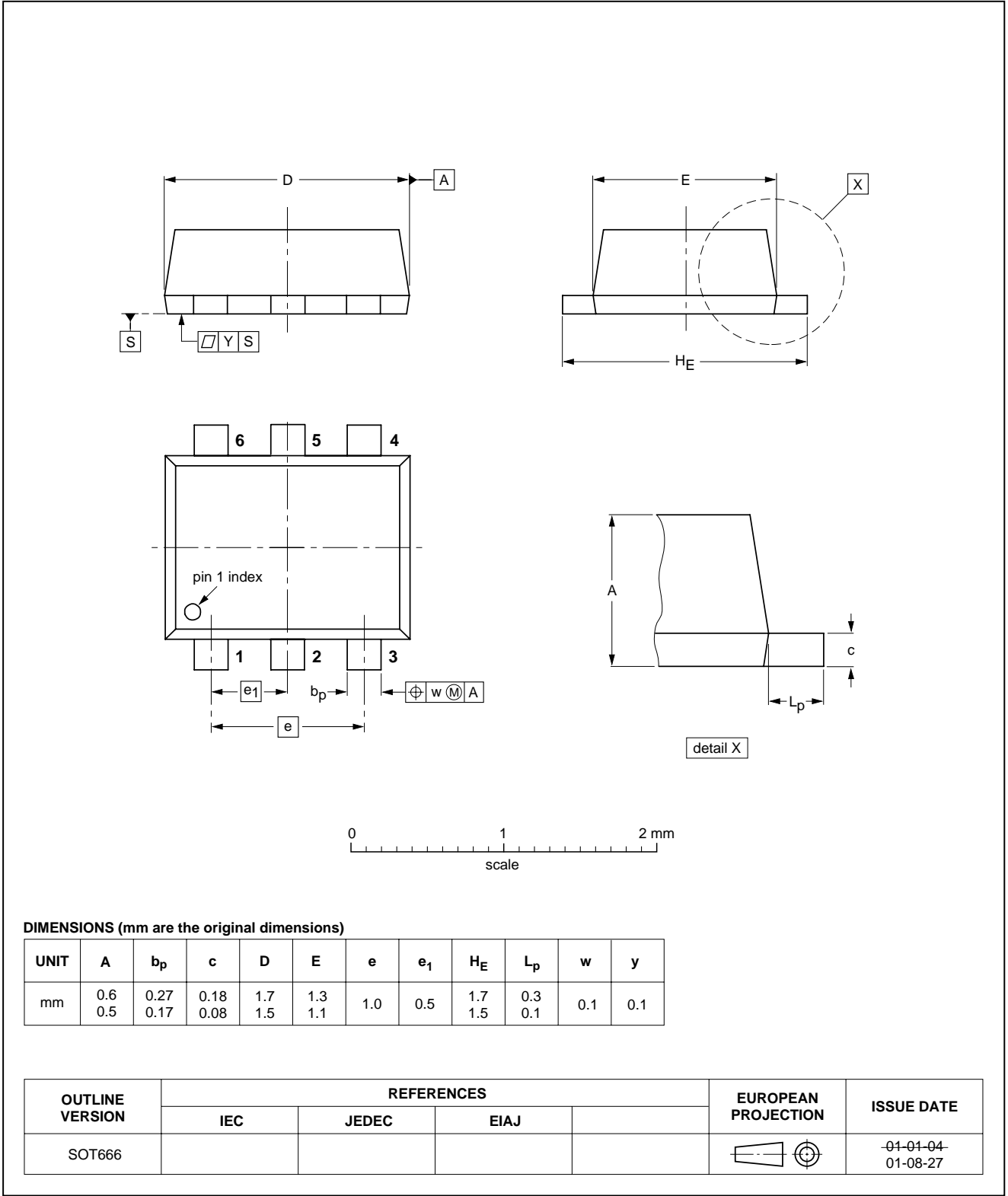
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PACKAGE OUTLINE

Plastic surface mounted package; 6 leads

SOT666



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## PMEG2015EV

## 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.

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

For sales offices addresses send e-mail to: **[salesaddresses@nxp.com](mailto:salesaddresses@nxp.com)**

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Printed in The Netherlands

613514/02/pp7

Date of release: 2003 Jun 03

Document order number: 9397 750 11556

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