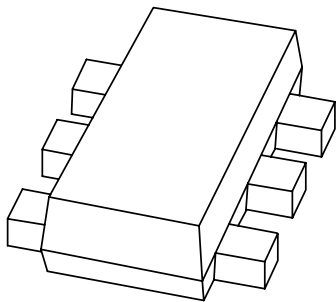


DATA SHEET



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

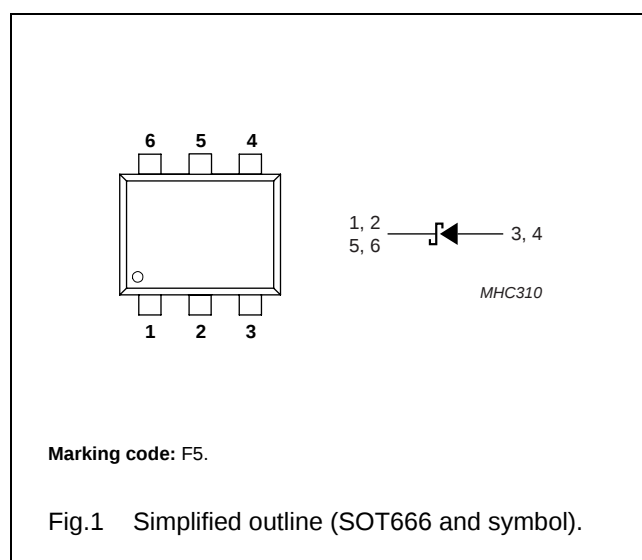
- Low voltage rectification
- High efficiency DC-DC conversion
- Switch mode power supply
- Inverse polarity protection
- Low power consumption applications.

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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PMEG2015EV

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	μA
		$V_R = 8\text{ V}$	7	20	μA
		$V_R = 15\text{ V}$	10	50	μA
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 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 cm^2 .
- Soldering point of cathode tabs.

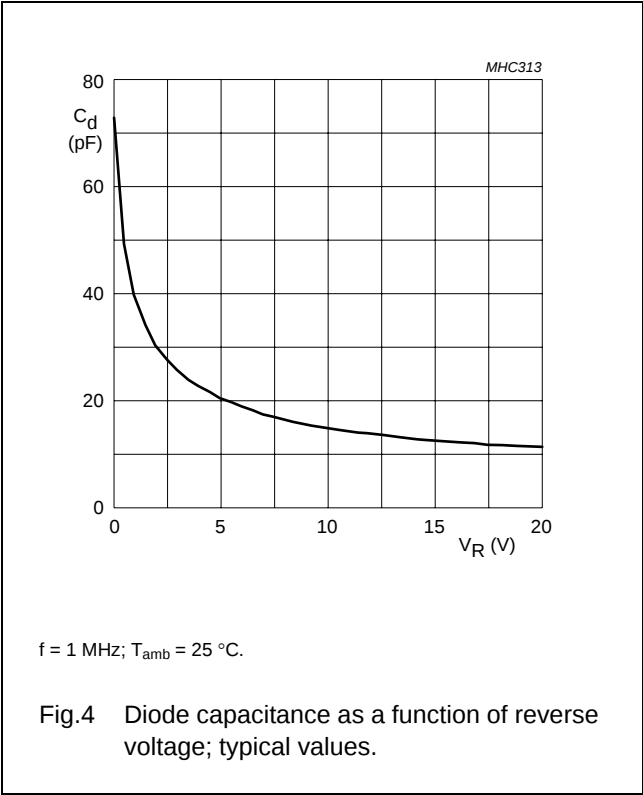
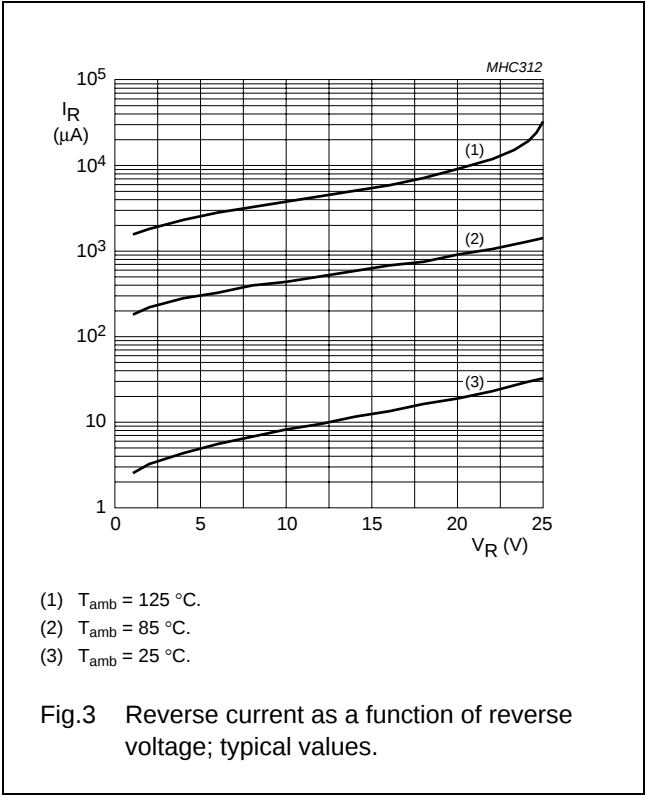
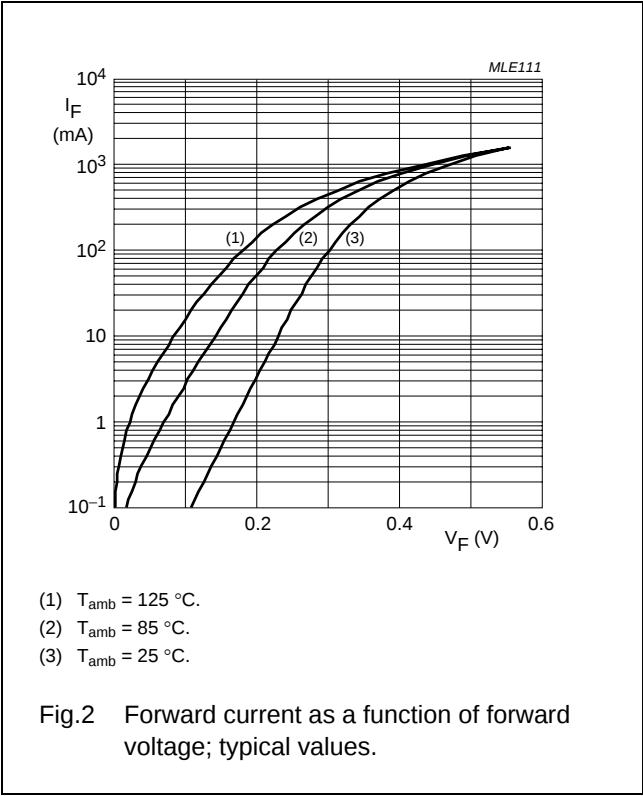
Soldering

Reflow soldering is the only recommended soldering method.

Low V_F MEGA Schottky barrier diode

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GRAPHICAL DATA



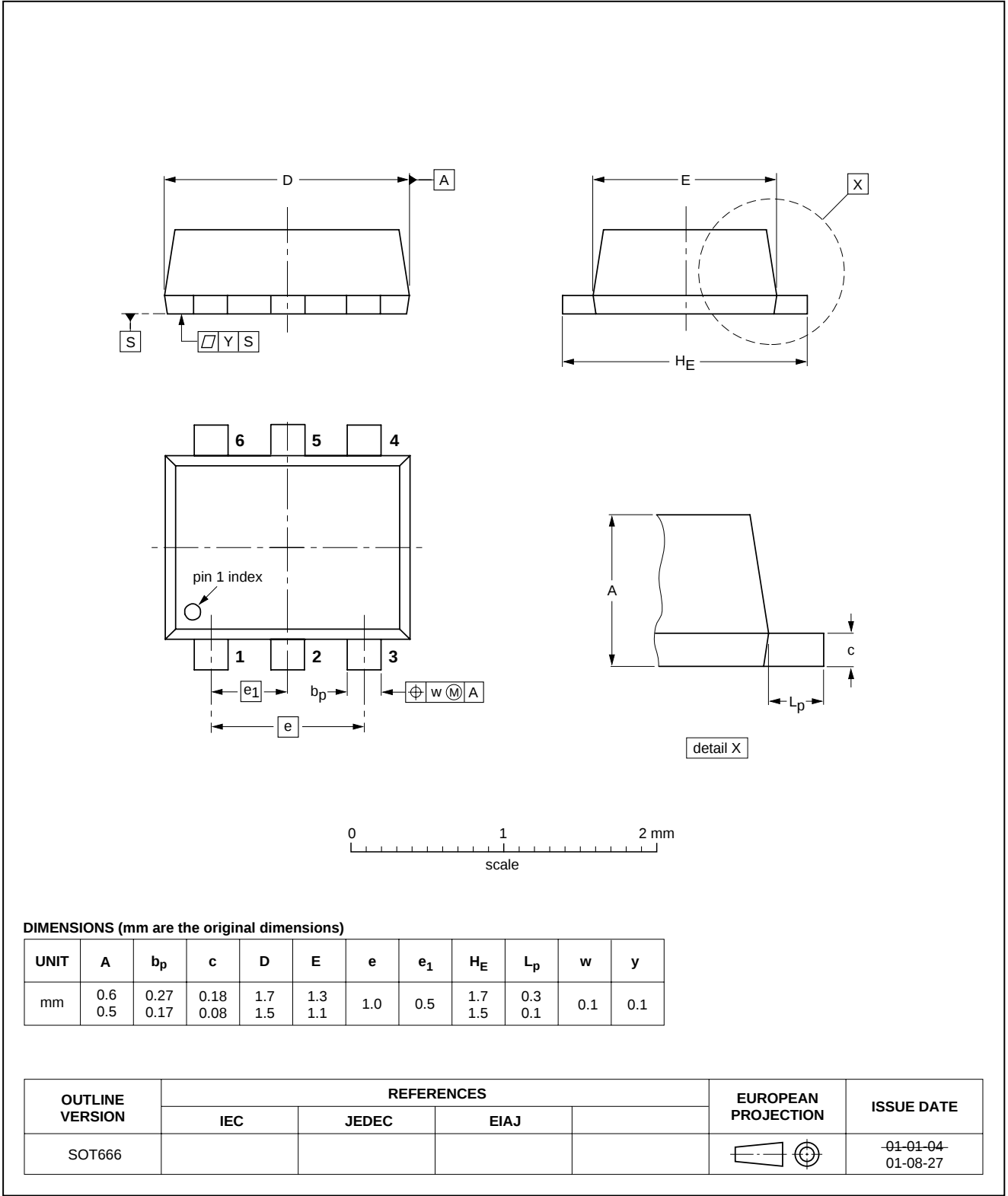
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PACKAGE OUTLINE

Plastic surface mounted package; 6 leads

SOT666



Low V_F MEGA Schottky barrier diode

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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.

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