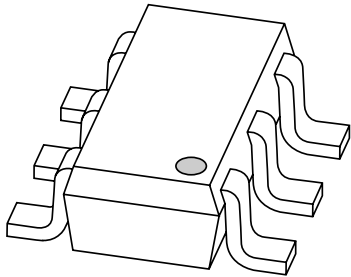


# DATA SHEET



## **PMEG6010AED**

Low  $V_F$  (MEGA) Schottky barrier diode

# Low $V_F$ (MEGA) Schottky barrier diode

# PMEG6010AED

### FEATURES

- Low switching losses
- Very high surge current absorption capability
- Fast recovery time
- Guard ring protected
- Plastic SMD package.

### APPLICATIONS

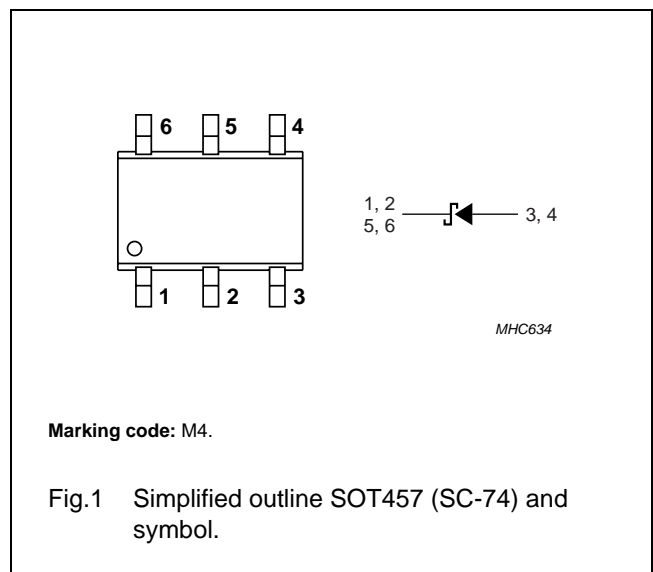
- Low power switched-mode power supplies
- Rectification
- Polarity protection.

### GENERAL DESCRIPTION

Planar Schottky barrier diode encapsulated in a SOT457 (SC-74) small plastic package.

### PINNING

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



### LIMITING VALUES

In accordance with Absolute Maximum Rating System (IEC 60134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_R$	continuous reverse voltage		–	60	V
$I_F$	continuous forward current	$T_{amb} \leq 25\text{ °C}$ ; note 1	–	1	A
$I_{FSM}$	non-repetitive peak forward current	$t = 8\text{ ms}$ ; square wave	–	17.5	A
$I_{RSM}$	non-repetitive peak reverse current	$t_p = 100\text{ }\mu\text{s}$	–	0.5	A
$T_{stg}$	storage temperature		–65	+150	°C
$T_j$	junction temperature		–	+150	°C

### Note

1. Device mounted on a printed-circuit board, single sided copper, tinplated, mounting pad for cathode 6 cm<sup>2</sup>.

Low  $V_F$  (MEGA) Schottky barrier diode

## PMEG6010AED

**ELECTRICAL CHARACTERISTICS**

$T_{amb} = 25\text{ °C}$ ; unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
$V_F$	continuous forward voltage	$I_F = 0.1\text{ A}$	400	mV
		$I_F = 1\text{ A}$	650	mV
$I_R$	continuous reverse current	$V_R = 60\text{ V}$ ; see Fig.3	350	$\mu\text{A}$
		$V_R = 60\text{ V}$ ; $T_j = 100\text{ °C}$ ; notes 1 and 2	8	mA
$C_d$	diode capacitance	$V_R = 4\text{ V}$ ; $f = 1\text{ MHz}$ ; see Fig.4	60	pF

**Notes**

1. Pulse test:  $t_p = 300\text{ }\mu\text{s}$ ;  $\delta = 0.02$ .
2. For Schottky barrier diodes thermal runaway has to be considered, as in some applications, the reverse power losses  $P_R$  are a significant part of the total power losses.

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	in free air; note 1	230	K/W
		in free air; note 2	180	K/W

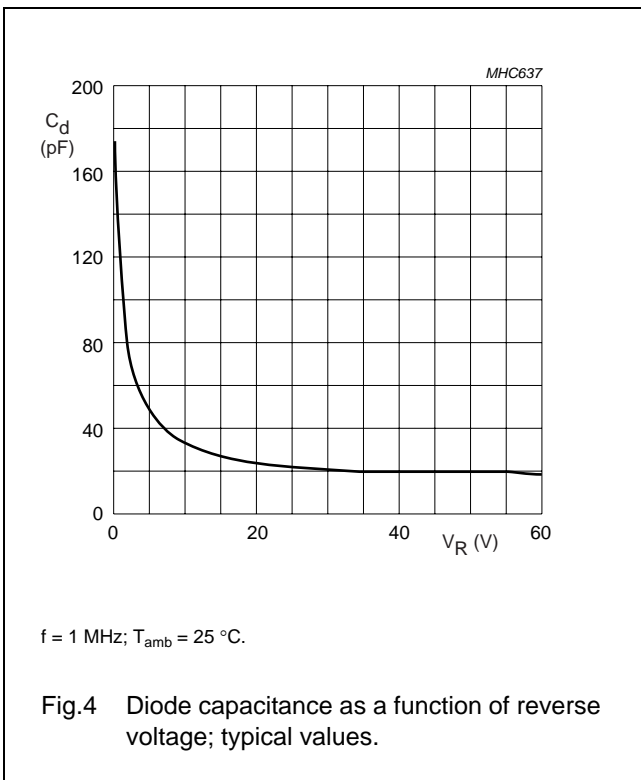
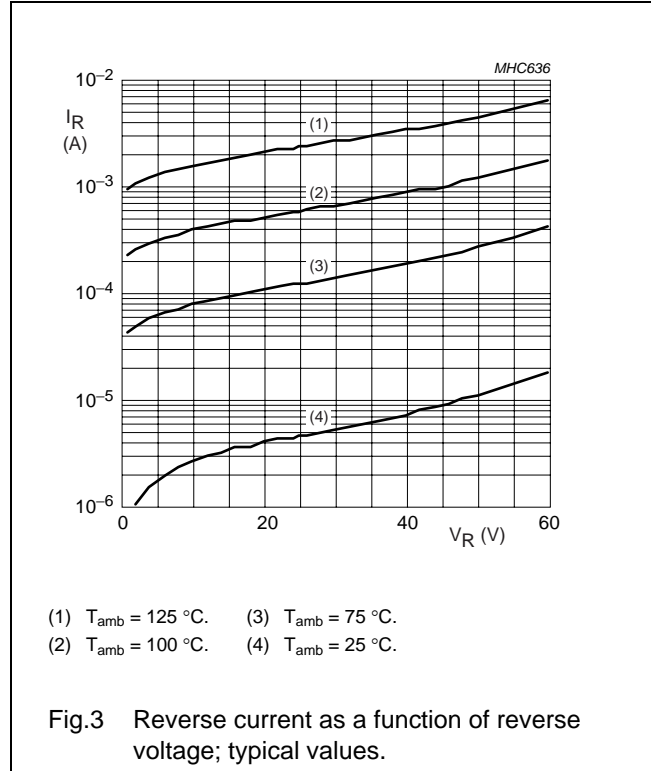
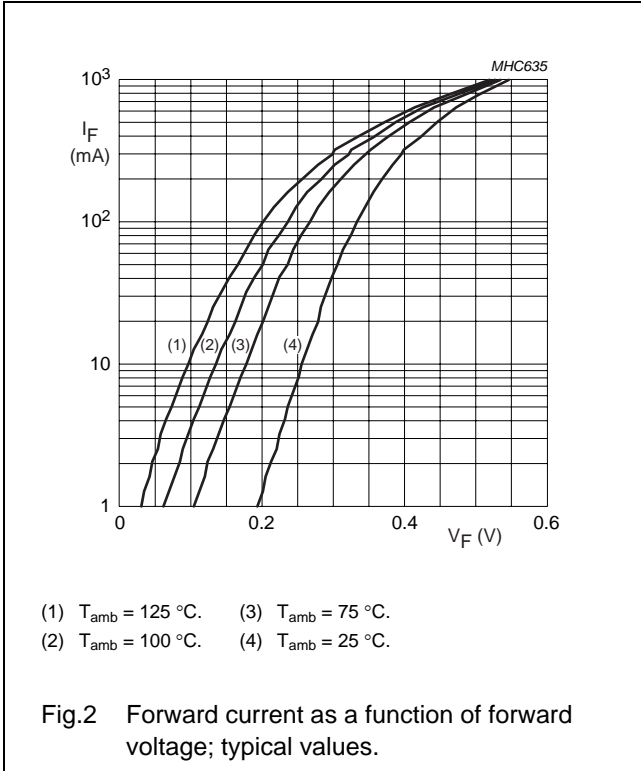
**Notes**

1. Device mounted on a printed-circuit board, single-sided copper, tinplated, mounting pad for cathode  $1\text{ cm}^2$ .
2. Device mounted on a printed-circuit board, single-sided copper; tinplated, mounting pad for cathode  $6\text{ cm}^2$ .

Low  $V_F$  (MEGA) Schottky barrier diode

PMEG6010AED

GRAPHICAL DATA



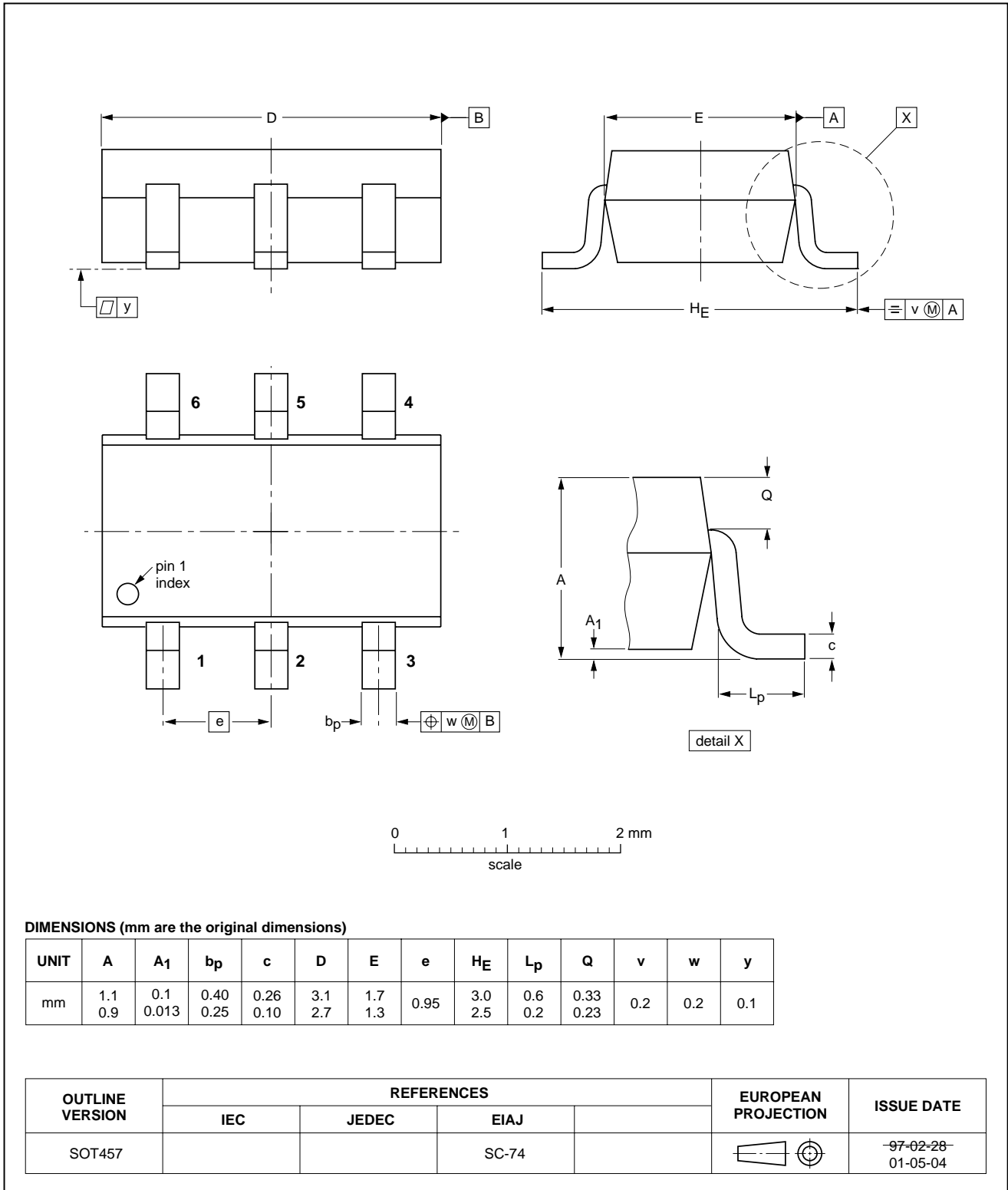
Low  $V_F$  (MEGA) Schottky barrier diode

PMEG6010AED

PACKAGE OUTLINE

Plastic surface mounted package; 6 leads

SOT457



# Low $V_F$ (MEGA) Schottky barrier diode

# PMEG6010AED

## 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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## **Contact information**

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