



# SB2003M

## Schottky Barrier Diode 30V, 2A, Low IR, Single MCPH6

ON Semiconductor®

<http://onsemi.com>

### Applications

- High frequency rectification (switching regulators, converters, choppers)

### Features

- Low switching noise
- Halogen free compliance
- Low leakage current and high reliability due to highly reliable planar structure
- Ultrasmall package permitting applied sets to be small and slim (mounting height 0.85mm)

### Specifications

#### Absolute Maximum Ratings at Ta=25°C

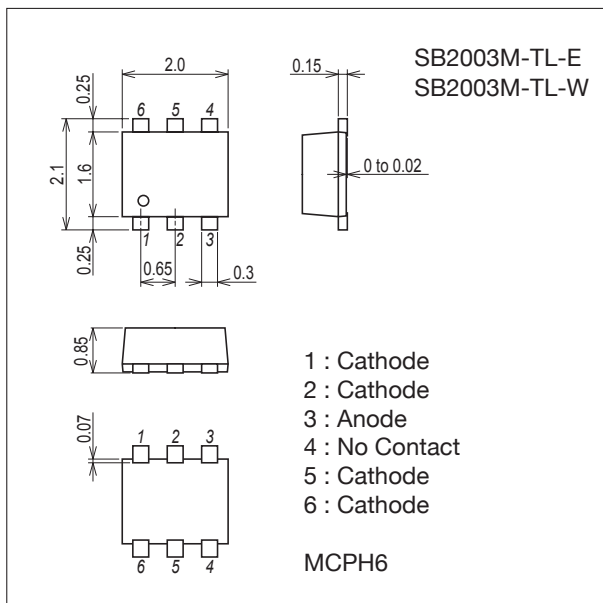
Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>		30	V
Nonrepetitive Peak Reverse Surge Voltage	V <sub>RSM</sub>		35	V
Average Output Current	I <sub>O</sub>		2.0	A
Surge Forward Current	I <sub>FSM</sub>	50Hz sine wave, 1 cycle	10	A
Junction Temperature	T <sub>J</sub>		-55 to +125	°C
Storage Temperature	T <sub>stg</sub>		-55 to +125	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

### Package Dimensions

unit : mm (typ)

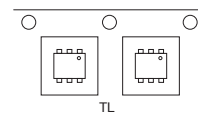
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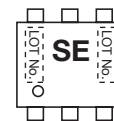
### Product & Package Information

- Package : MCPH6
- JEITA, JEDEC : SC-88, SC-70-6, SOT-363
- Minimum Packing Quantity : 3,000 pcs./reel

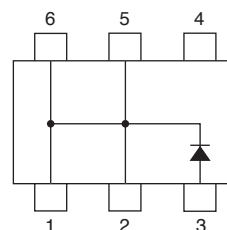
### Packing Type : TL



### Marking



### Electrical Connection



### ORDERING INFORMATION

See detailed ordering and shipping information on page 2 of this data sheet.

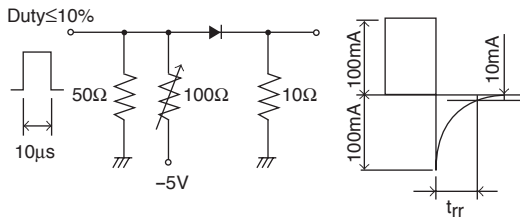
# SB2003M

## Electrical Characteristics at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	$V_R$	$I_R=0.2\text{mA}$	30			V
Forward Voltage	$V_F$	$I_F=1.0\text{A}$		0.40	0.45	V
		$I_F=2.0\text{A}$		0.45	0.50	V
Reverse Current	$I_R$	$V_R=15\text{V}$			30	$\mu\text{A}$
Interterminal Capacitance	C	$V_R=10\text{V}$ , $f=1\text{MHz}$		75		pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=100\text{mA}$ , See specified Test Circuit.			20	ns
Thermal Resistance	$R_{th(j-a)1}$	When mounted in Cu-foiled area of $1.44\text{mm}^2 \times 0.03\text{mm}$ on glass epoxy substrate		93.4		$^\circ\text{C} / \text{W}$
	$R_{th(j-a)2}$	When mounted on ceramic substrate ( $500\text{mm}^2 \times 0.8\text{mm}$ )		71.4		$^\circ\text{C} / \text{W}$

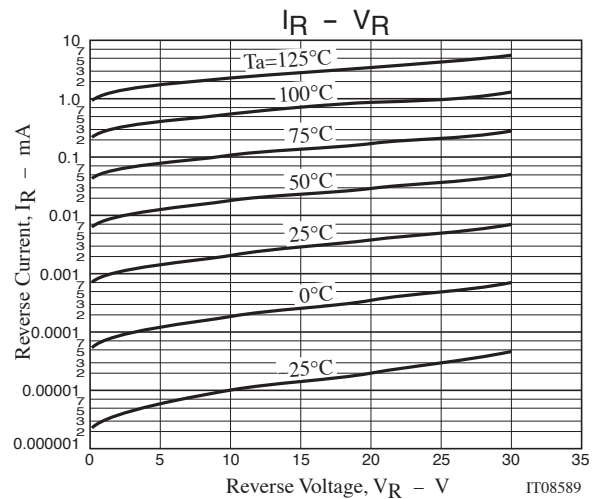
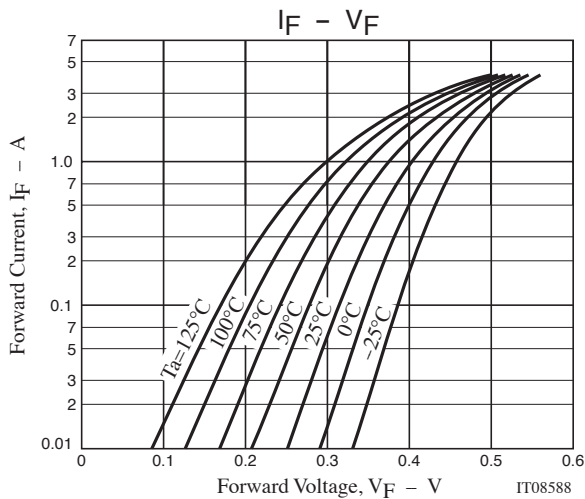
Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

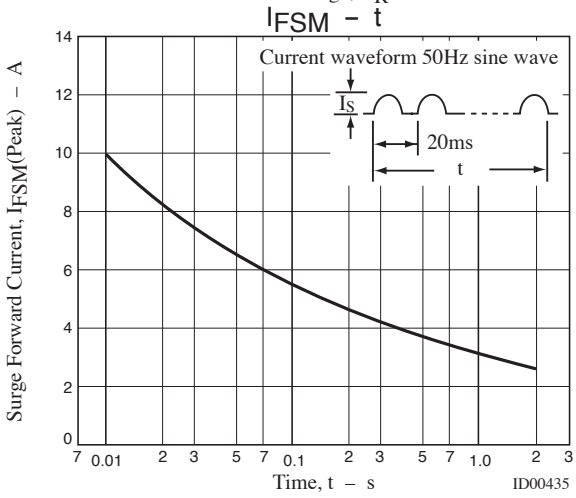
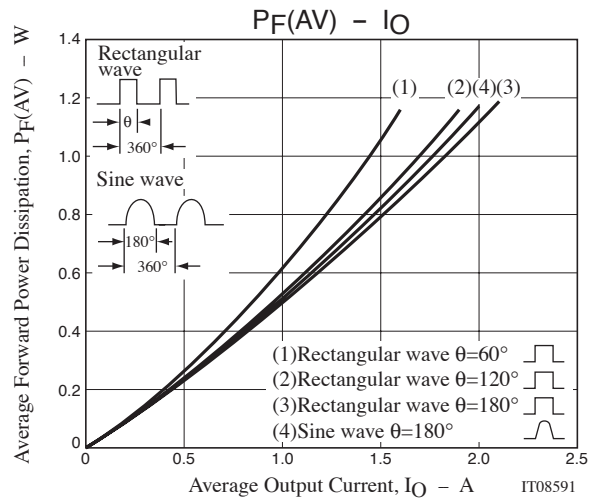
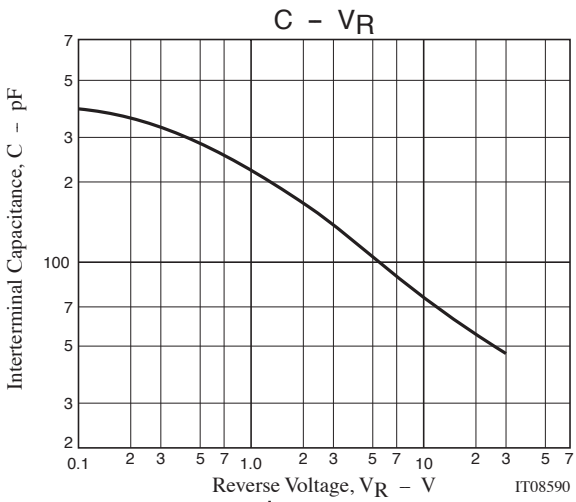
### $t_{rr}$ Test Circuit



### Ordering Information

Device	Package	Shipping	memo
SB2003M-TL-E	MCPH6	3,000pcs./reel	Pb-Free
SB2003M-TL-W	MCPH6	3,000pcs./reel	Pb-Free and Halogen Free

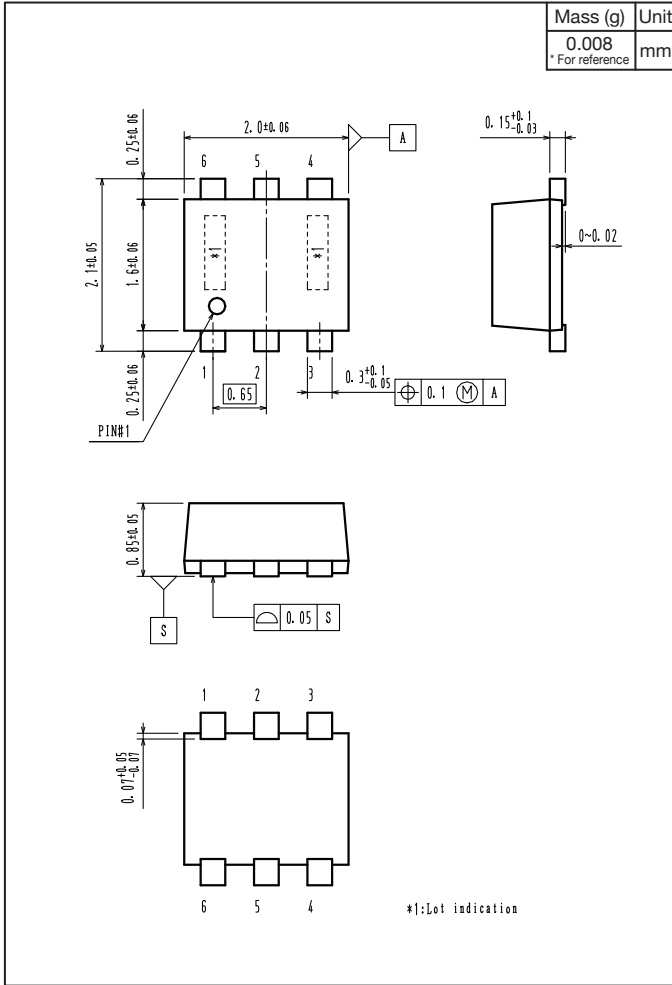




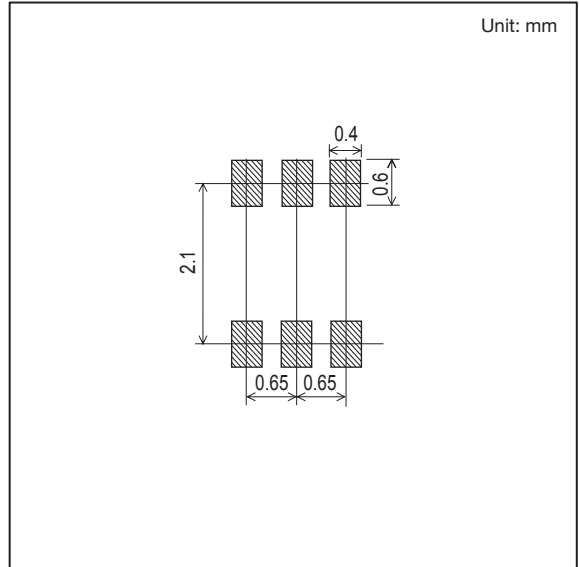
# SB2003M

## Outline Drawing

SB2003M-TL-E, SB2003M-TL-W



## Land Pattern Example



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