



SANYO Semiconductors

# DATA SHEET

An ON Semiconductor Company

## SB2003M — 30V, 2.0A Rectifier

Schottky Barrier Diode

### Applications

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

### Features

- Low switching noise
- 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

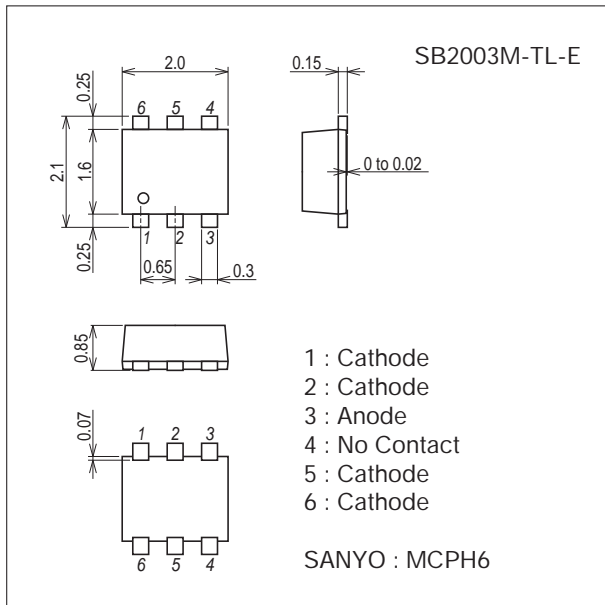
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	VRRM		30	V
Nonrepetitive Peak Reverse Surge Voltage	VRSM		35	V
Average Output Current	IO		2.0	A
Surge Forward Current	IFSM	50Hz sine wave, 1 cycle	10	A
Junction Temperature	Tj		-55 to +125	°C
Storage Temperature	Tstg		-55 to +125	°C

### Package Dimensions

unit : mm (typ)

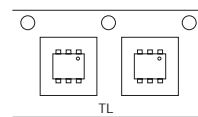
7022A-014



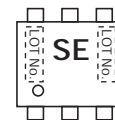
### Product & Package Information

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

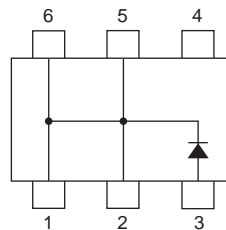
Packing Type : TL



Marking



### Electrical Connection

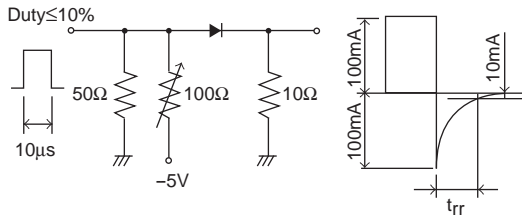


# SB2003M

## Electrical Characteristics at Ta=25°C

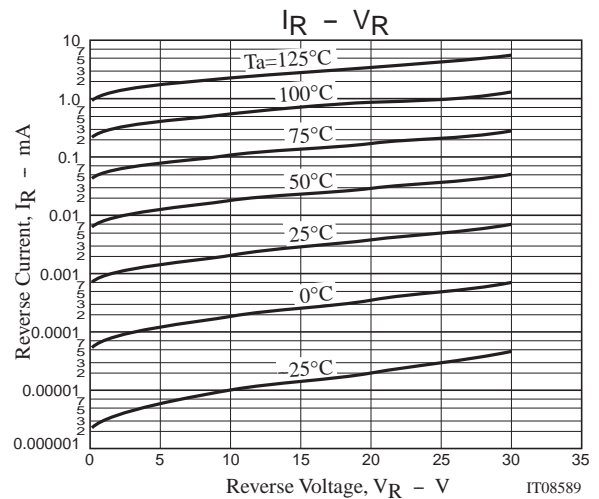
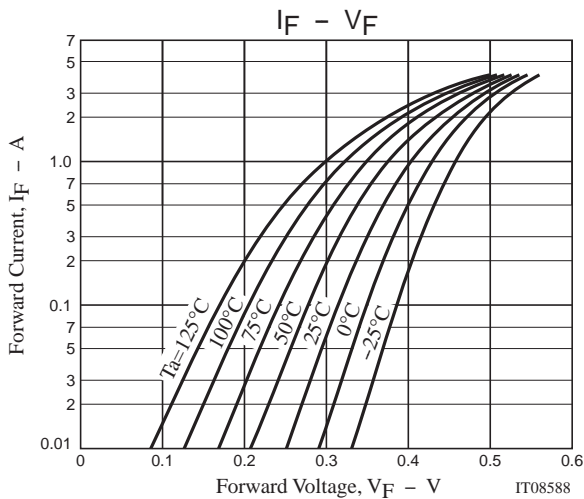
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V <sub>R</sub>	I <sub>R</sub> =0.2mA	30			V
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =1.0A		0.40	0.45	V
		I <sub>F</sub> =2.0A		0.45	0.50	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =15V			30	μA
Interterminal Capacitance	C	V <sub>R</sub> =10V, f=1MHz		75		pF
Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> =I <sub>R</sub> =100mA, See specified Test Circuit.			20	ns
Thermal Resistance	Rth(j-a)1	When mounted in Cu-foiled area of 1.44mm <sup>2</sup> ×0.03mm on glass epoxy substrate		93.4		°C / W
	Rth(j-a)2	When mounted on ceramic substrate (500mm <sup>2</sup> ×0.8mm)		71.4		°C / W

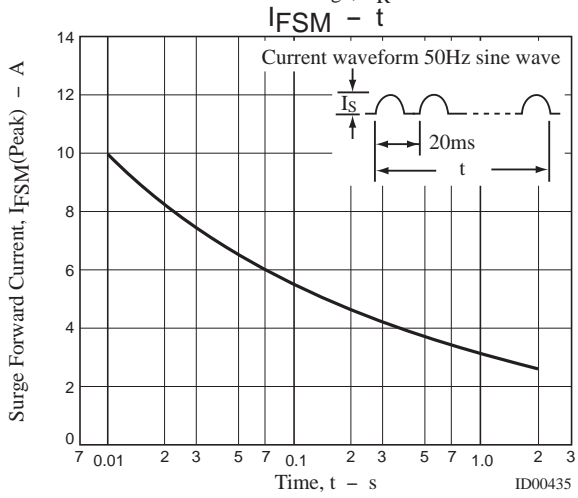
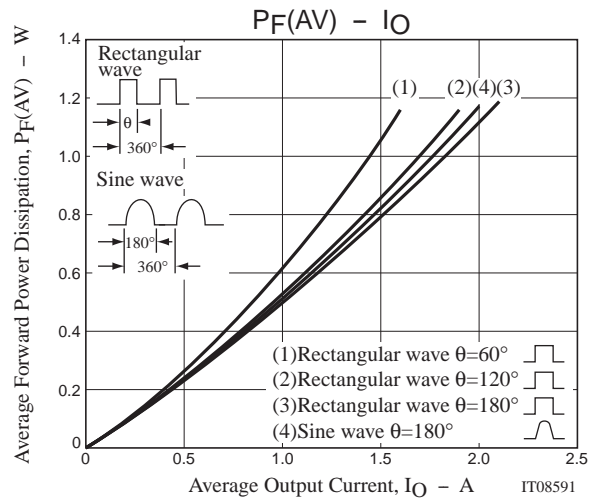
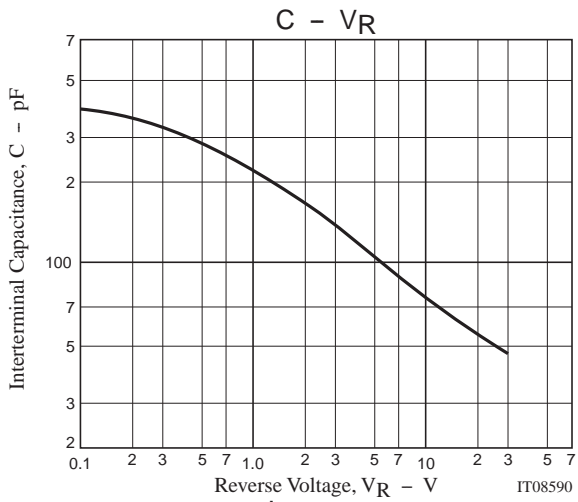
### t<sub>rr</sub> Test Circuit



### Ordering Information

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





# SB2003M

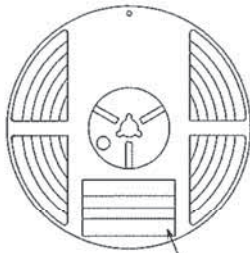
## Embossed Taping Specification

SB2003M-TL-E

### 1. Packing Format

Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
MCPH6	MCP4	3,000	15,000	90,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

#### Packing method



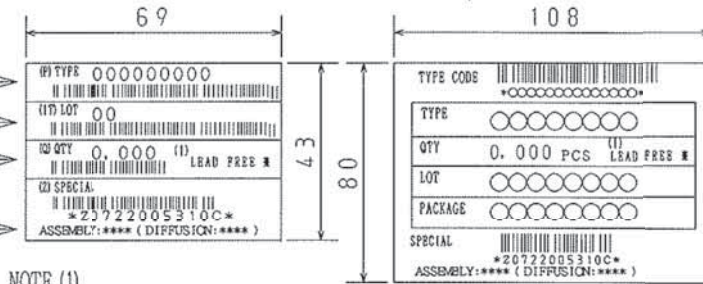
Type No.  
LOT No.  
Quantity  
Origin

Reel label

Reel label, Inner box label  
(unit:mm)

Outer box label

(It is a label at the time of factory shipments. The form of a label may change in physical distribution process.)



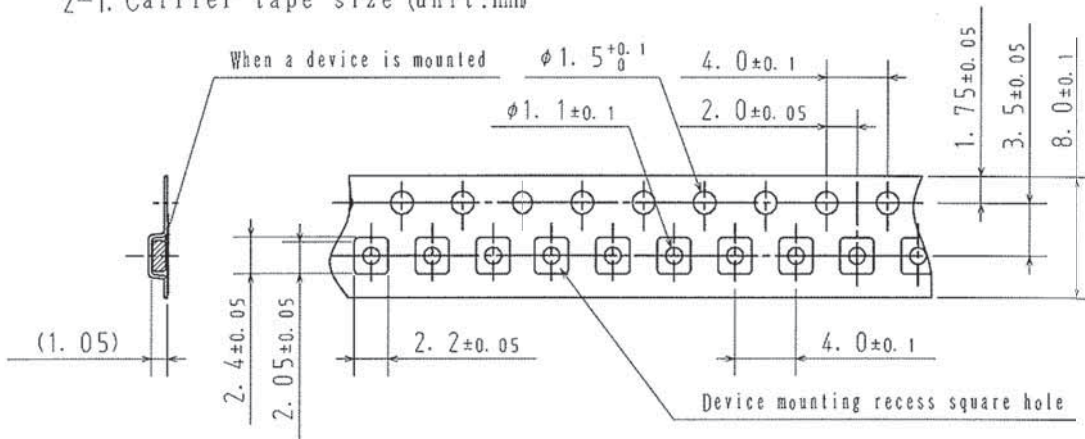
NOTE (1)

The LEAD FREE \* description shows that the surface treatment of the terminal is lead free.

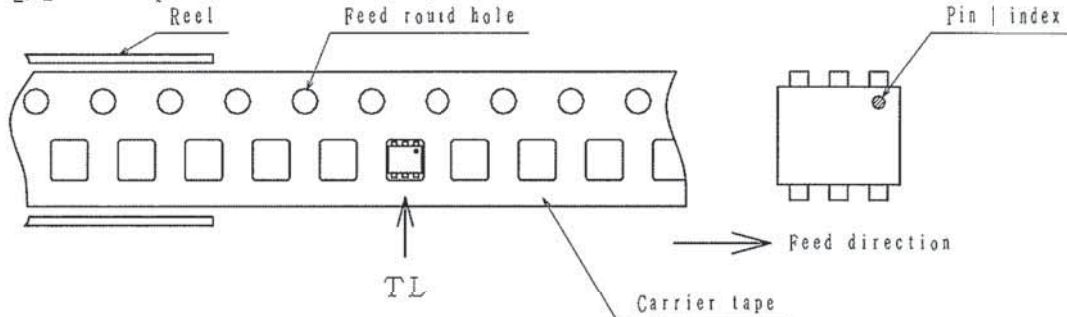
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

### 2. Taping configuration

#### 2-1. Carrier tape size (unit:mm)



#### 2-2. Device placement direction

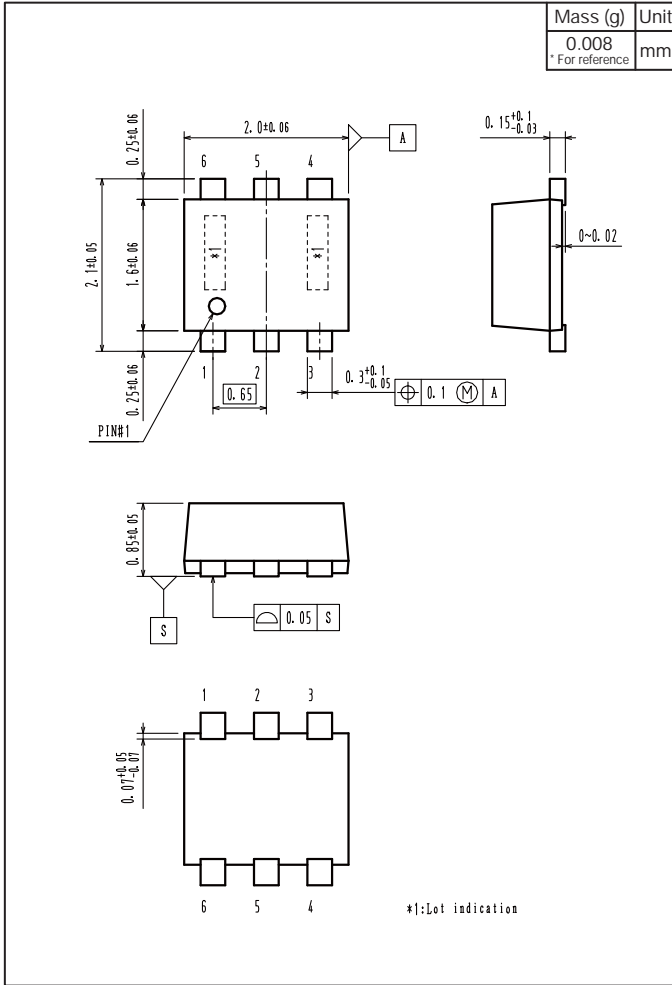


Those with pin | index on the feed hole side.....TL

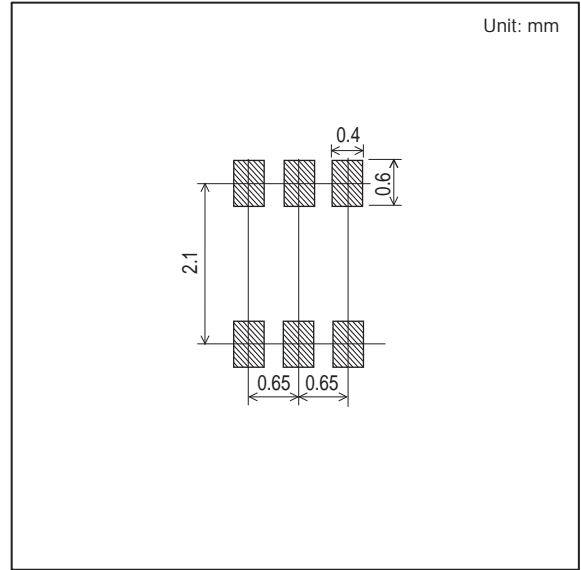
# SB2003M

## Outline Drawing

SB2003M-TL-E



## Land Pattern Example



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- Техническая поддержка проекта;
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