



# SB1003M3

## Schottky Barrier Diode 30V, 1A, Low IR, Single MCPH3

ON Semiconductor®

<http://onsemi.com>

### 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

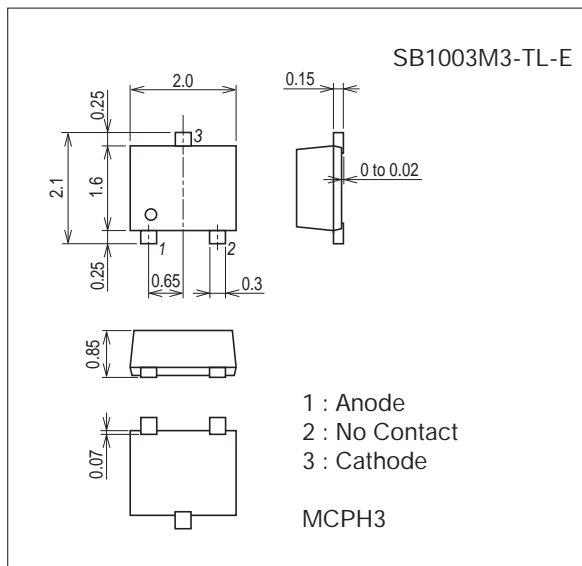
Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>		30	V
Nonrepetitive Peak Reverse Surge Voltage	V <sub>RSM</sub>		35	V
Average Output Current	I <sub>O</sub>		1.0	A
Surge Forward Current	I <sub>FSM</sub>	50Hz sine wave, 1 cycle	10	A
Junction Temperature	T <sub>J</sub>		-55 to +125	°C
Storage Temperature	T <sub>stg</sub>		-55 to +125	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

### Package Dimensions

unit : mm (typ)

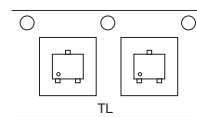
7019A-001



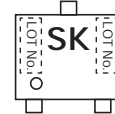
### Product & Package Information

- Package : MCPH3
- JEITA, JEDEC : SC-70, SOT-323
- Minimum Packing Quantity : 3,000 pcs./reel

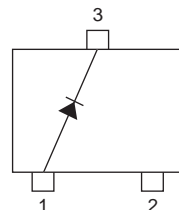
### Packing Type : TL



### Marking



### Electrical Connection



## SB1003M3

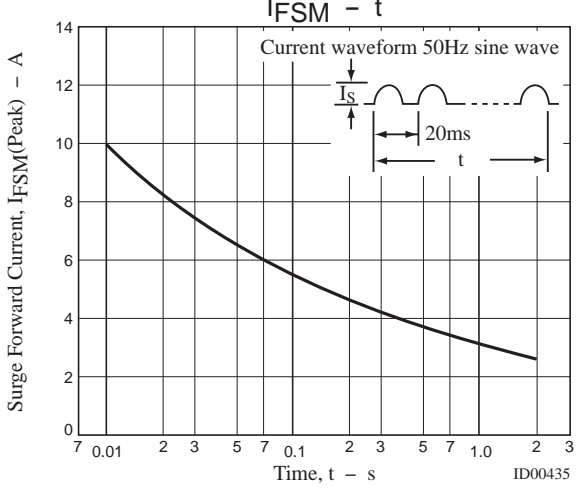
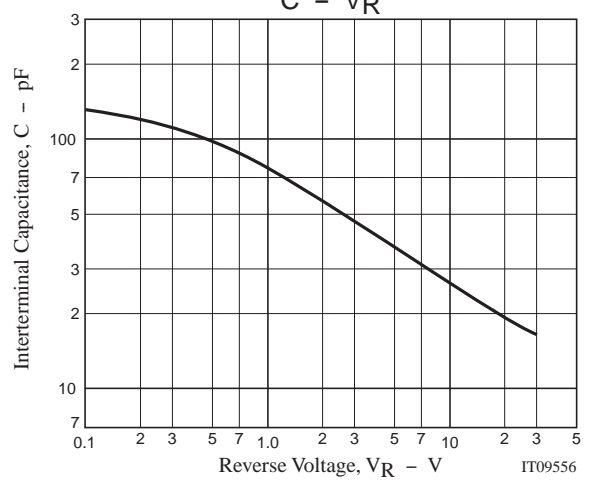
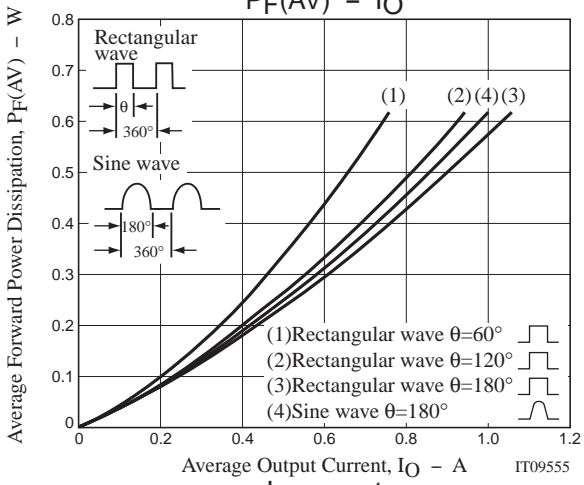
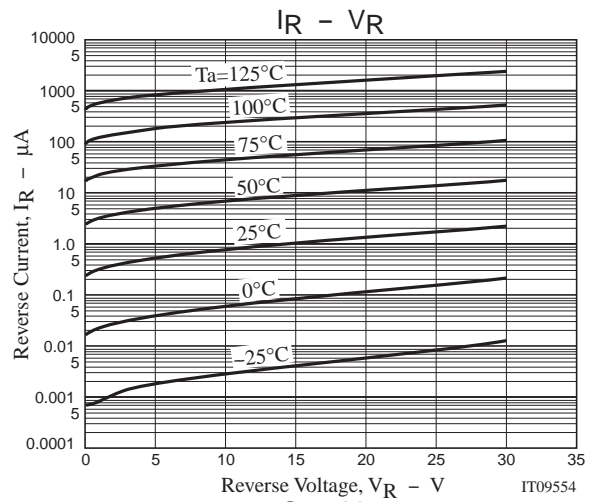
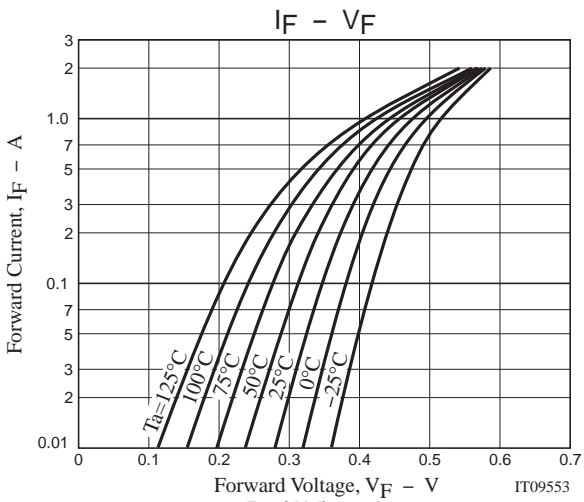
### Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V <sub>R</sub>	I <sub>R</sub> =0.5mA	30			V
Forward Voltage	V <sub>F1</sub>	I <sub>F</sub> =0.7A		0.45	0.50	V
	V <sub>F2</sub>	I <sub>F</sub> =1.0A		0.48	0.53	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =16V			15	μA
Interterminal Capacitance	C	V <sub>R</sub> =10V, f=1MHz		27		pF
Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> =I <sub>R</sub> =100mA, See specified Test Circuit.			10	ns
Thermal Resistance	Rth(j-a)1	When mounted in Cu-foiled area of 0.72mm <sup>2</sup> ×0.03mm on glass epoxy substrate		94.7		°C / W
	Rth(j-a)2	When mounted on ceramic substrate (500mm <sup>2</sup> ×0.8mm)		67.7		°C / W

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

### Ordering Information

Device	Package	Shipping	memo
SB1003M3-TL-E	MCPH3	3,000pcs./reel	Pb Free



Taping Specification

SB1003M3-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)
MCPH3	MCPH3	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

Reel label, Inner box label  
(unit: mm)

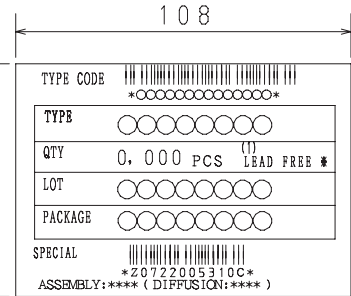
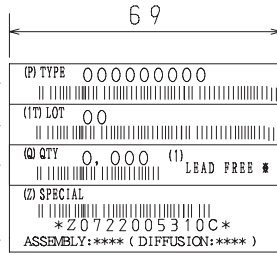
Outer box label  
It is a label at the time of factory shipments.  
The form of a label may change in physical distribution process.

Packing method



Reel label

Type No.  
LOT No.  
Quantity  
Origin



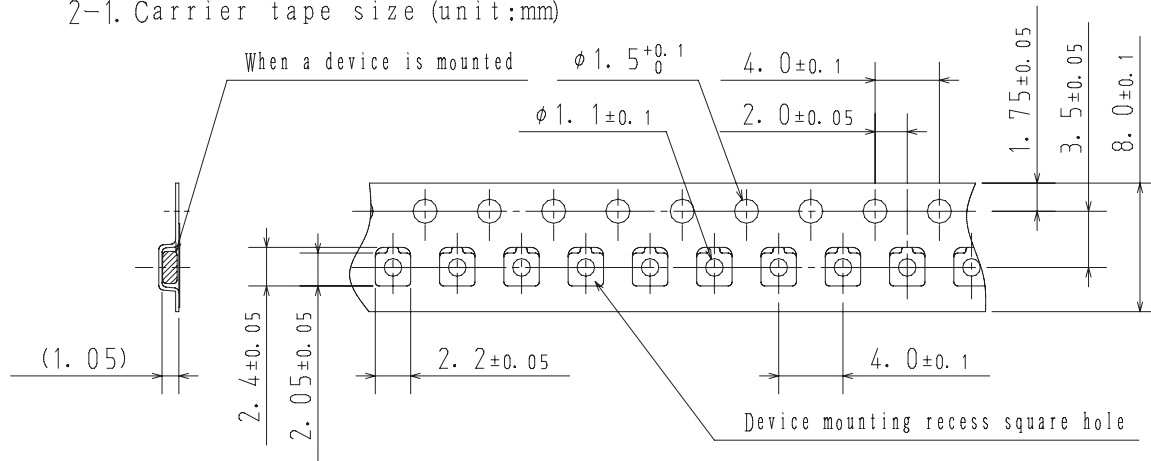
NOTE (1)

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)



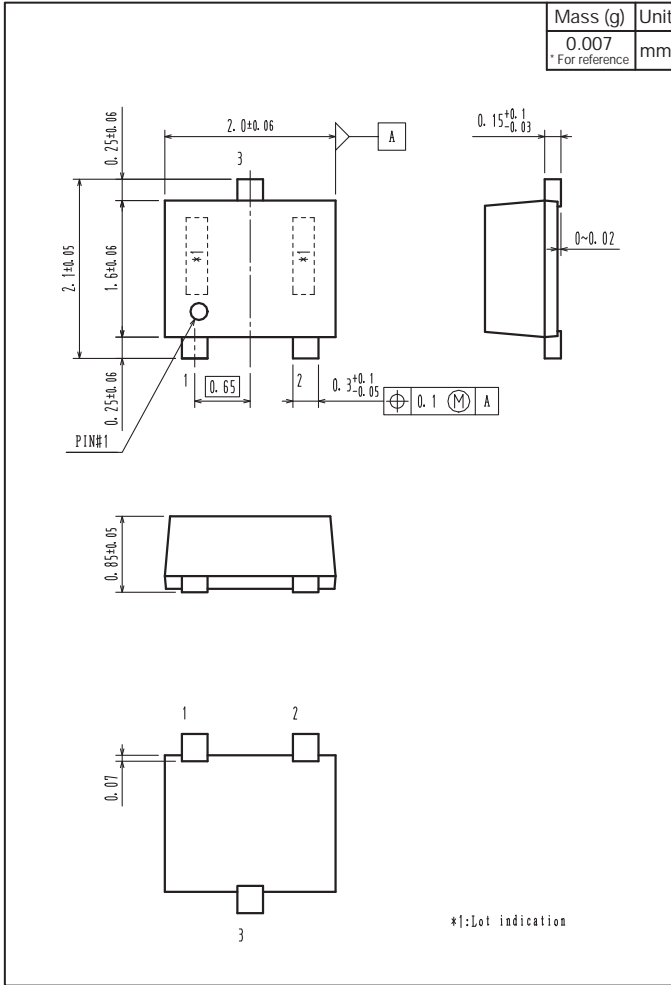
2-2. Device placement direction



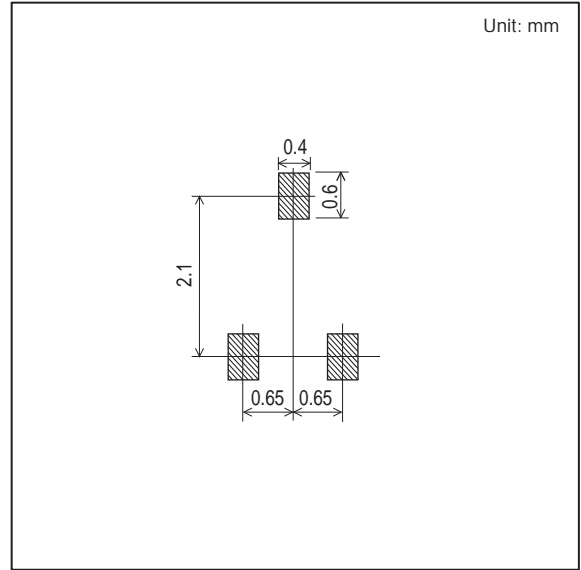
Those with pin 1 index on the feed hole side.....TL

# SB1003M3

## Outline Drawing SB1003M3-TL-E



## Land Pattern Example



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