



SANYO Semiconductors

## DATA SHEET

An ON Semiconductor Company

# SB1003M3 — Schottky Barrier Diode

## 30V, 1.0A Rectifier

### 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

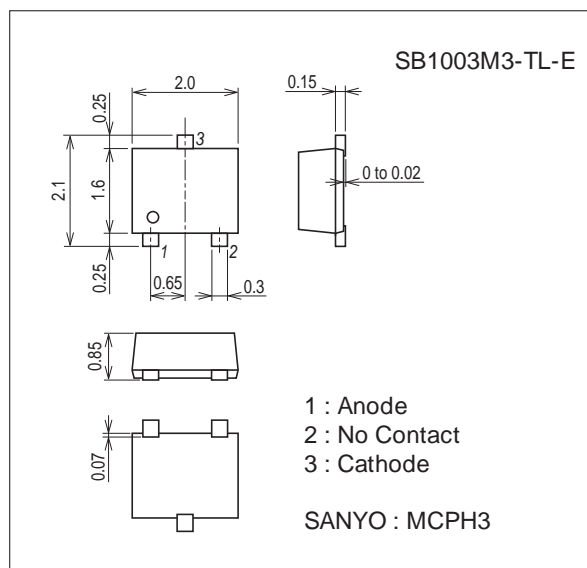
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	VRRM		30	V
Nonrepetitive Peak Reverse Surge Voltage	VRSM		35	V
Average Output Current	IO		1.0	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)

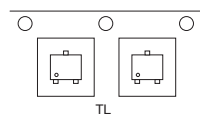
7019A-001



### Product & Package Information

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

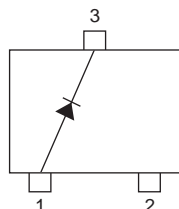
### Packing Type : TL



### Marking



### Electrical Connection

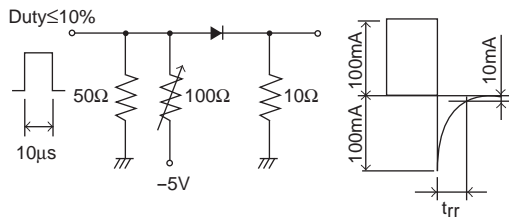


## SB1003M3

### Electrical Characteristics at Ta=25°C

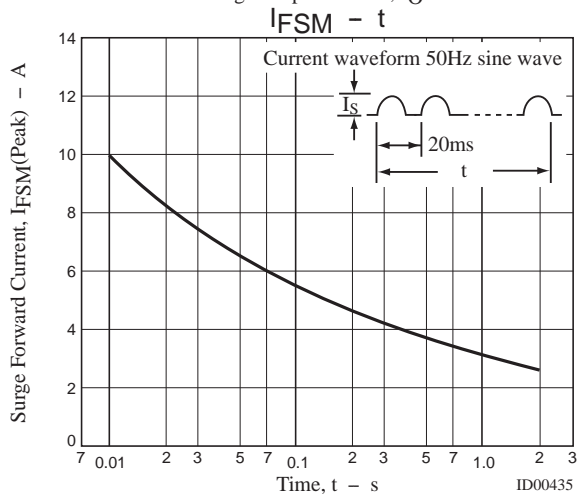
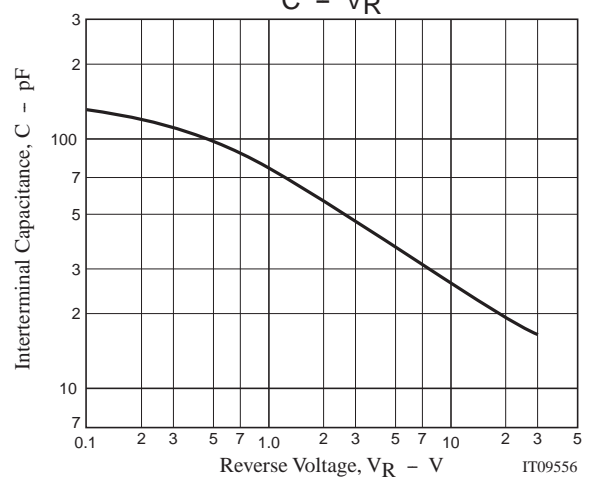
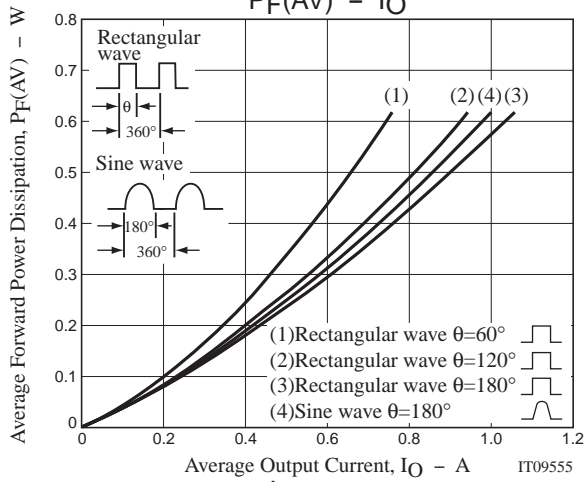
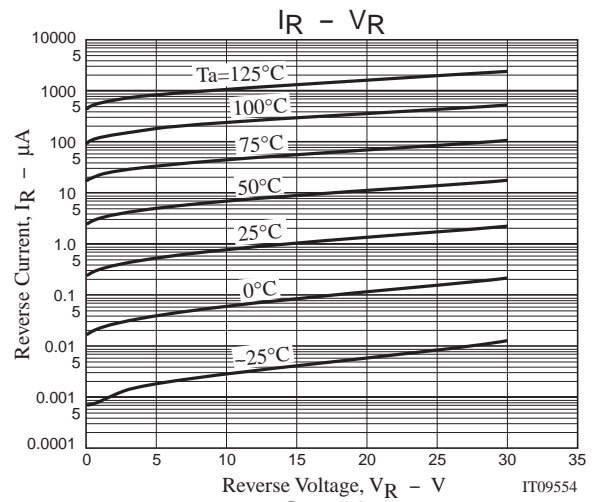
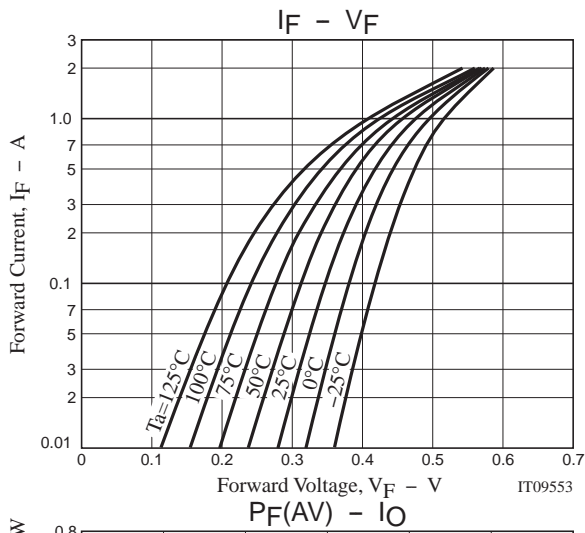
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	$V_R$	$I_R=0.5mA$	30			V
Forward Voltage	$V_{F1}$	$I_F=0.7A$		0.45	0.50	V
	$V_{F2}$	$I_F=1.0A$		0.48	0.53	V
Reverse Current	$I_R$	$V_R=16V$			15	$\mu A$
Interterminal Capacitance	C	$V_R=10V, f=1MHz$		27		pF
Reverse Recovery Time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

### $t_{rr}$ Test Circuit



### Ordering Information

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



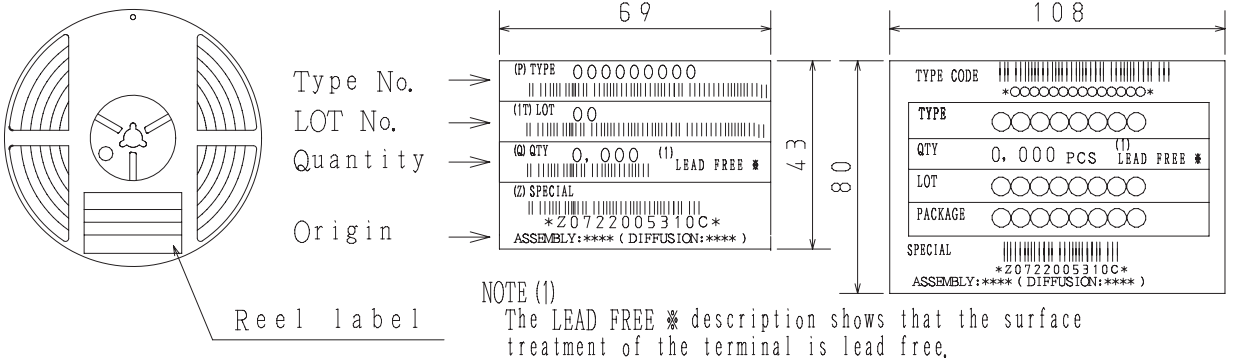
# Taping Specification

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

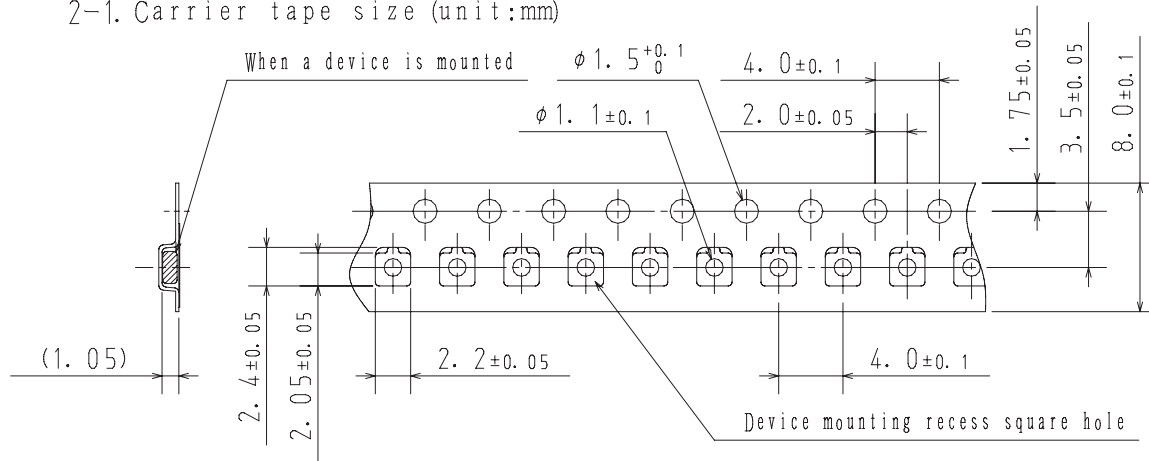
### Packing method



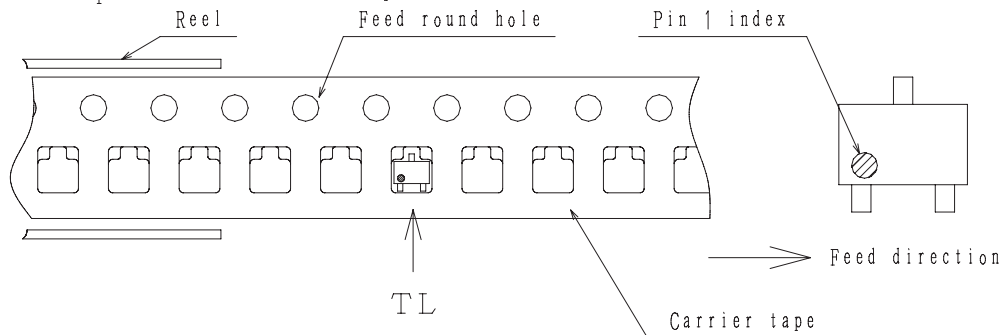
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

## 2. Taping configuration

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

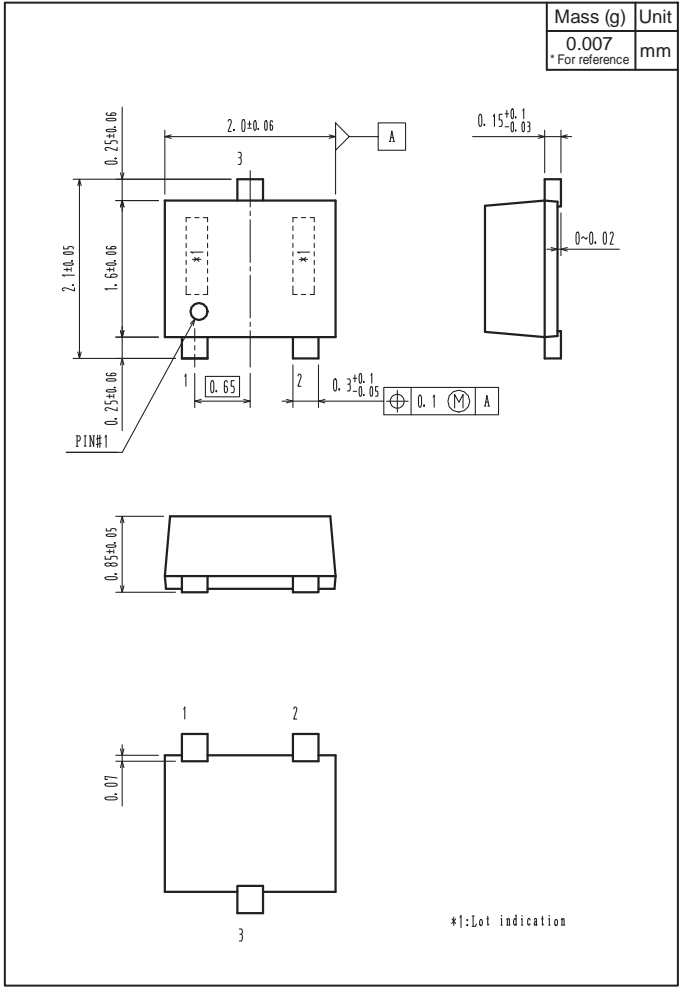


### 2-2. Device placement direction

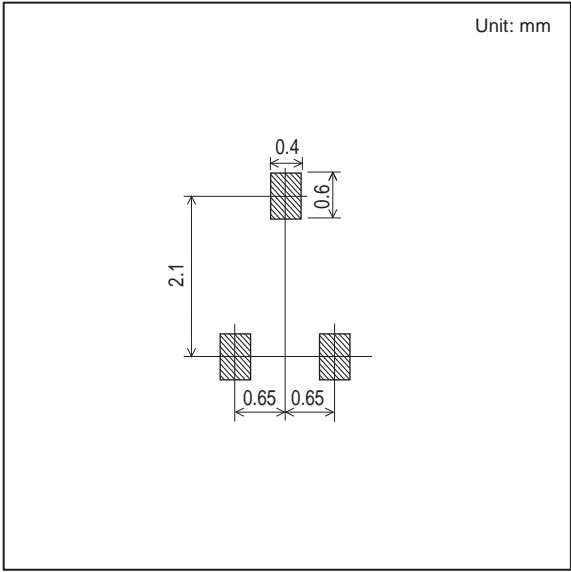


Those with pin 1 index on the feed hole side.....TL

Outline Drawing  
SB1003M3-TL-E



Land Pattern Example



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