



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

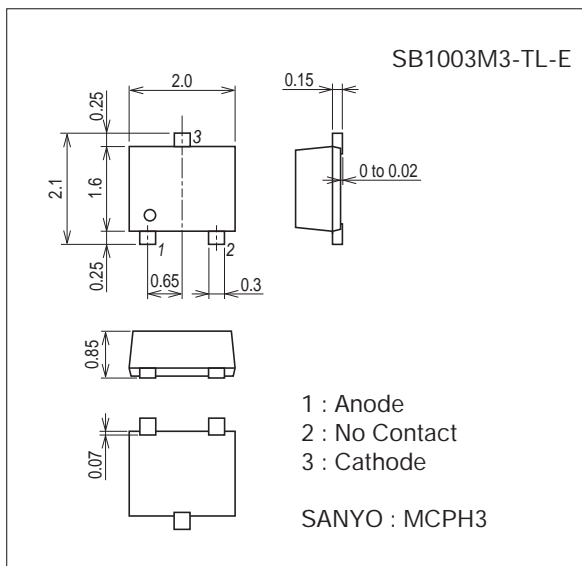
Absolute Maximum Ratings at Ta=25°C

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)

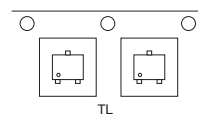
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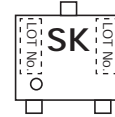
Product & Package Information

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

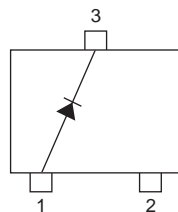
Packing Type : TL



Marking



Electrical Connection

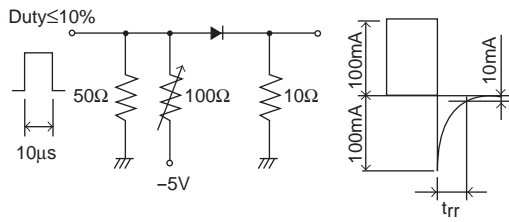


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Electrical Characteristics at Ta=25°C

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	μA
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	Rth(j-a)1	When mounted in Cu-foiled area of 0.72mm ² ×0.03mm on glass epoxy substrate		94.7		°C / W
	Rth(j-a)2	When mounted on ceramic substrate (500mm ² ×0.8mm)		67.7		°C / W

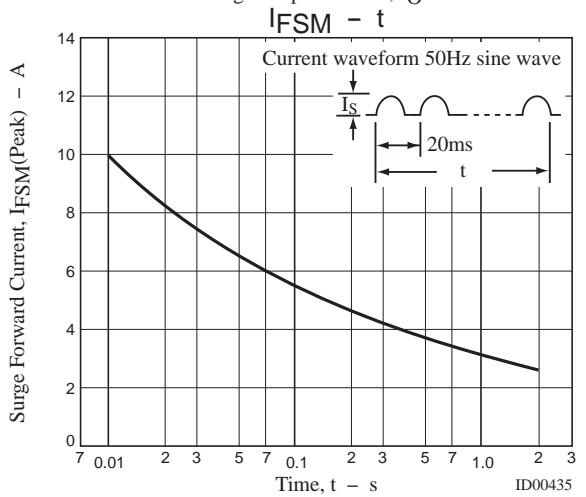
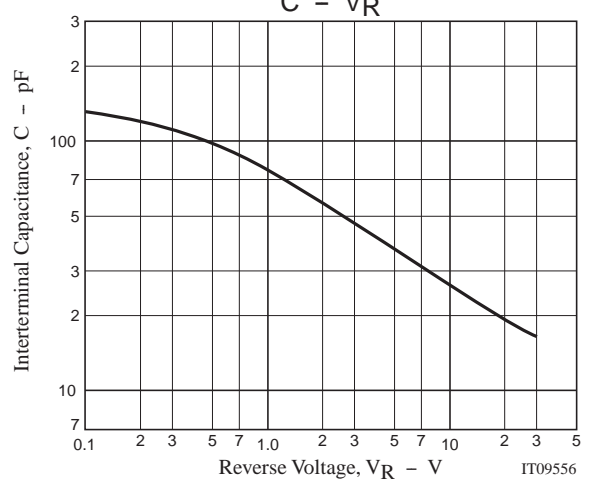
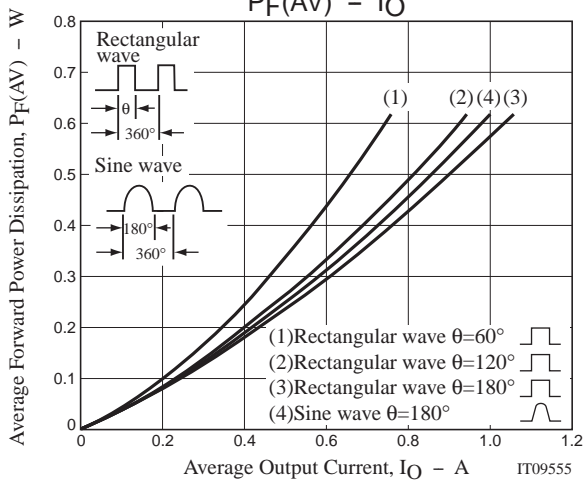
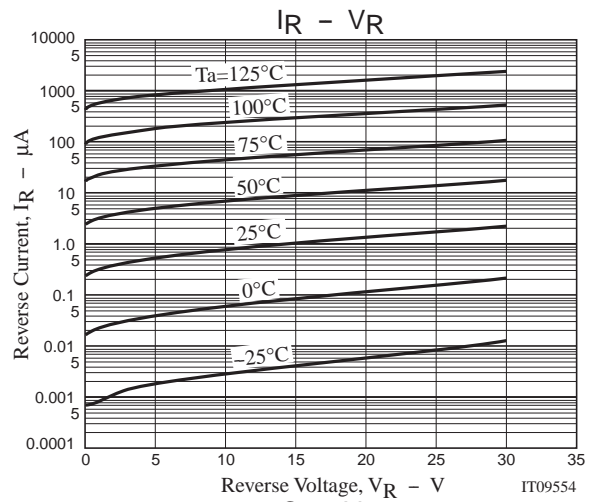
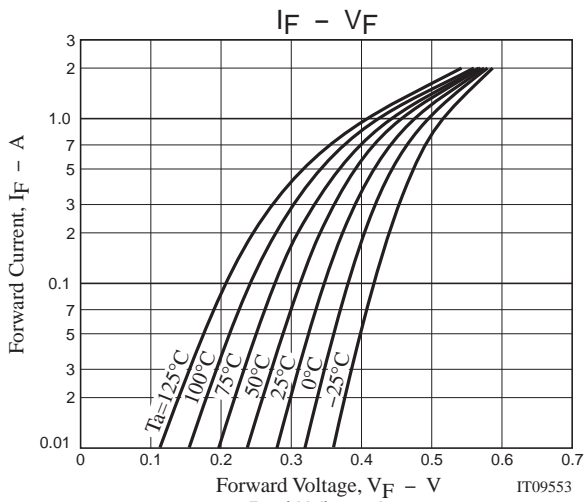
t_{rr} Test Circuit



Ordering Information

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

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Taping Specification

SB1003M3-TL-E

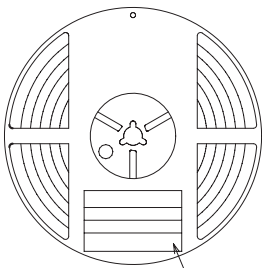
1. Packing Format

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)

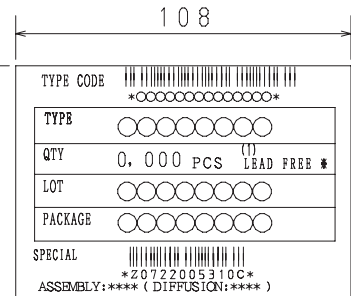
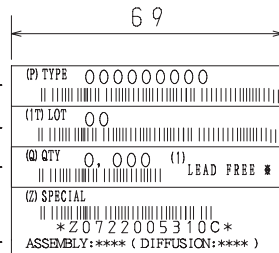
Outer box label
It is a label at the time of factory shipments.
The form of a label may change in physical distribution process.

Packing method



Type No.
LOT No.
Quantity
Origin

Reel label



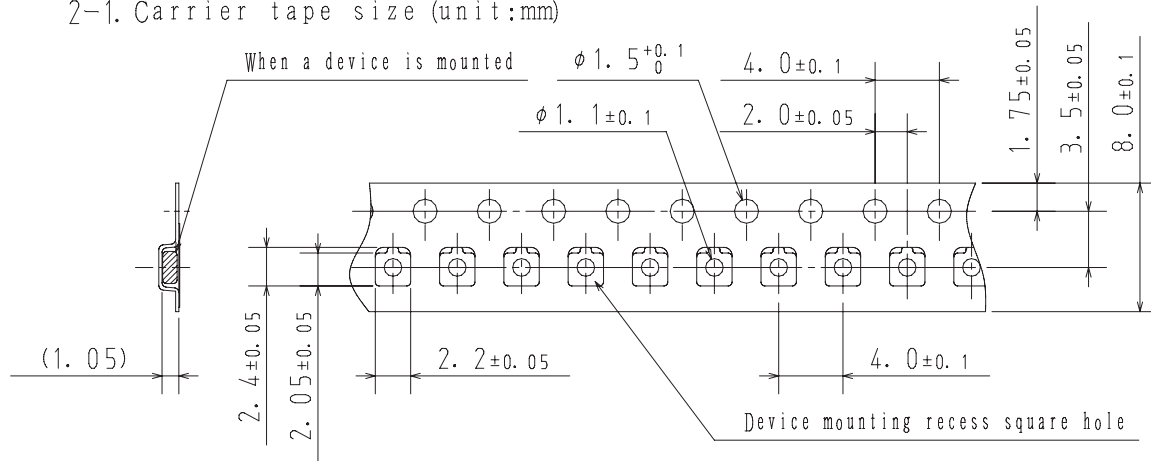
NOTE (1)

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

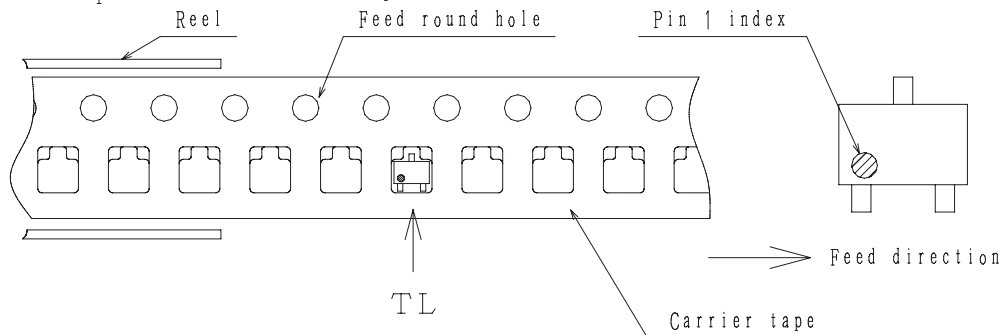
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



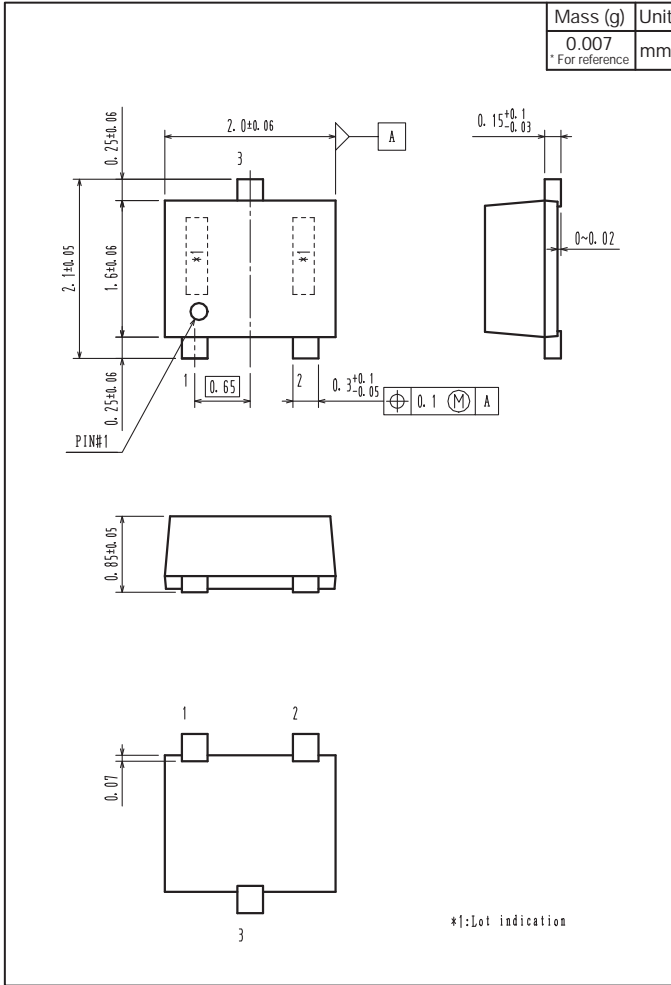
2-2. Device placement direction



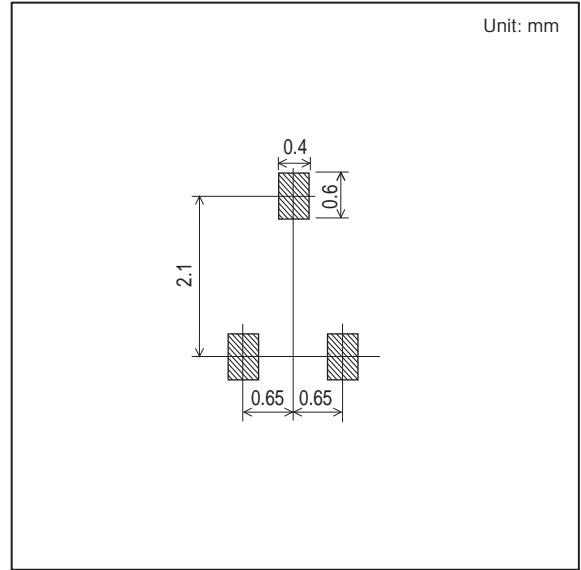
Those with pin 1 index on the feed hole side.....TL

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Outline Drawing SB1003M3-TL-E



Land Pattern Example



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