Ordering number : ENA0444A

SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

SB10015M — Low I_R Schottky Barrier Diode 15V, 1.0A Rectifier

Applications

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

Features

- Small 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

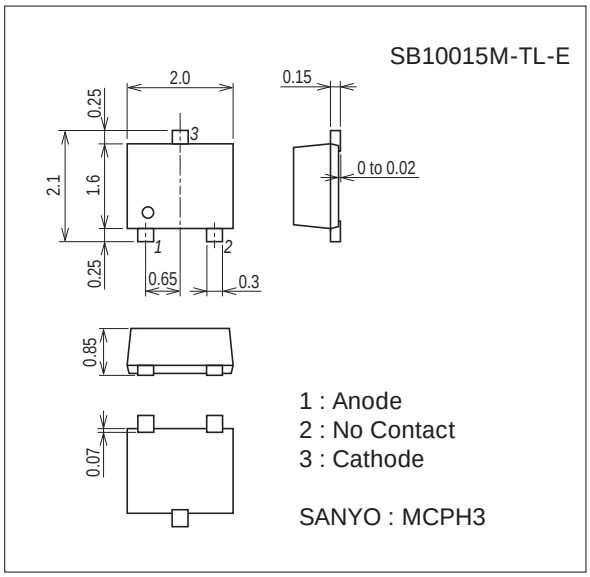
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	V_{RRM}		15	V
Nonrepetitive Peak Reverse Surge Voltage	V_{RSM}		17	V
Average Output Current	I_O		1.0	A
Surge Forward Current	I_{FSM}	50Hz sine wave, 1 cycle	10	A
Junction Temperature	Tj		−55 to +150	°C
Storage Temperature	Tstg		−55 to +150	°C

Package Dimensions

unit : mm (typ)

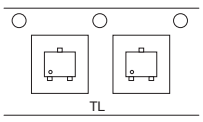
7019A-001



Product & Package Information

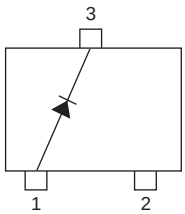
- Package : MCPH3
- JEITA, JEDEC : SC-70, SOT-323
- Minimum Packing Quantity : 3,000 pcs./reel

Packing Type : TL



Marking

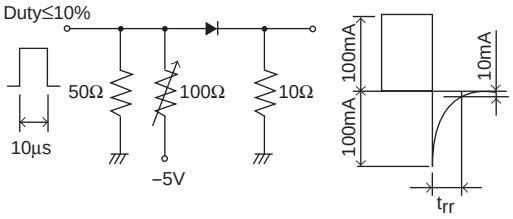
Electrical Connection



Electrical Characteristics at Ta=25°C

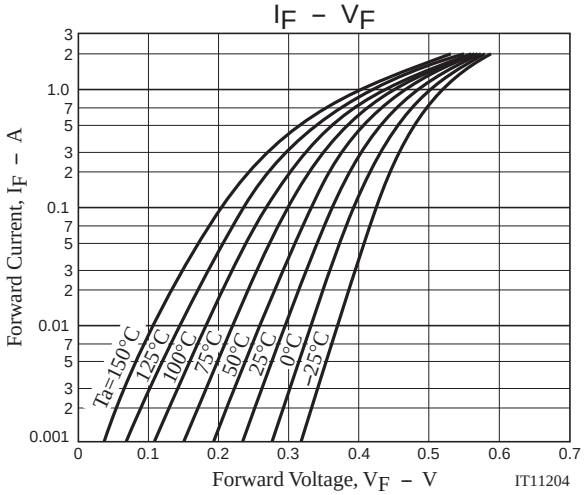
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V_R	I_R=0.1mA	15			V
Forward Voltage	V_F1	I_F=0.5A		0.43	0.48	V
	V_F2	I_F=1.0A		0.49	0.54	V
Reverse Current	I_R	V_R=7.5V			3	μA
Interterminal Capacitance	C	V_R=10V, f=1MHz		20		pF
Reverse Recovery Time	t_{rr}	I_F=I_R=100mA, See specified Test Circuit.			10	ns
Thermal Resistance	Rth(j-a)	When mounted in Cu-foiled area of 0.72mm²×0.03mm on glass epoxy substrate		185		°C / W

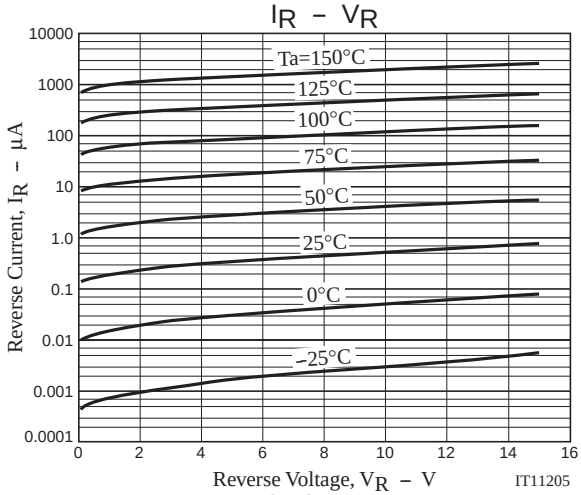
t_{rr} Test Circuit

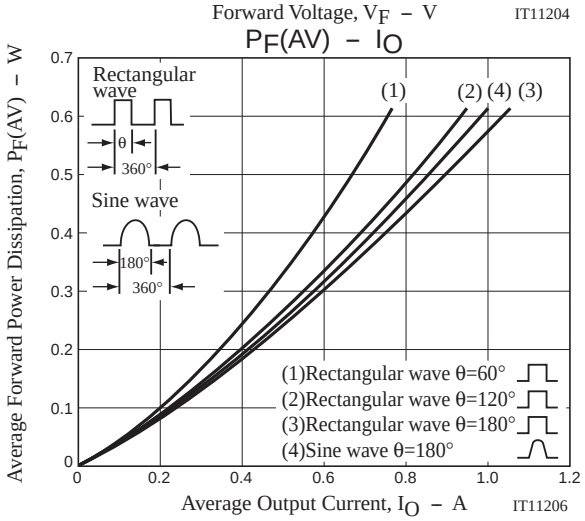


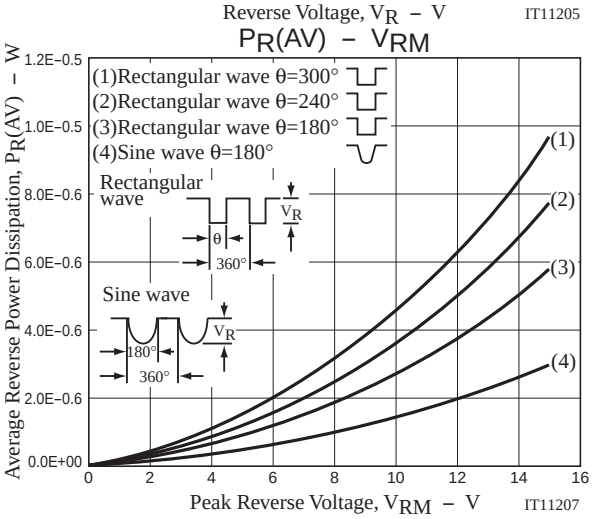
Ordering Information

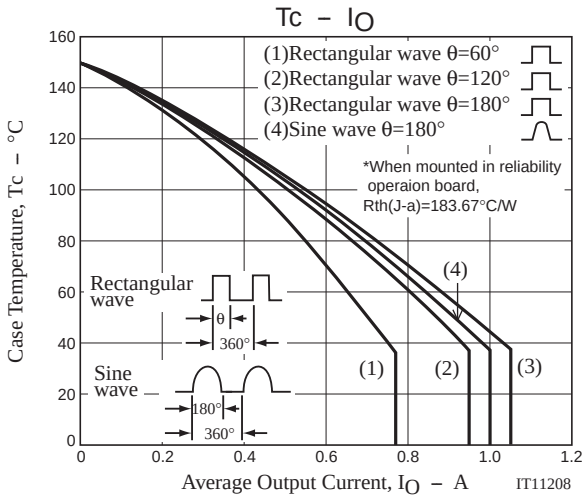
Device	Package	Shipping	memo
SB10015M-TL-E	MCPH3	3,000pcs./reel	Pb Free

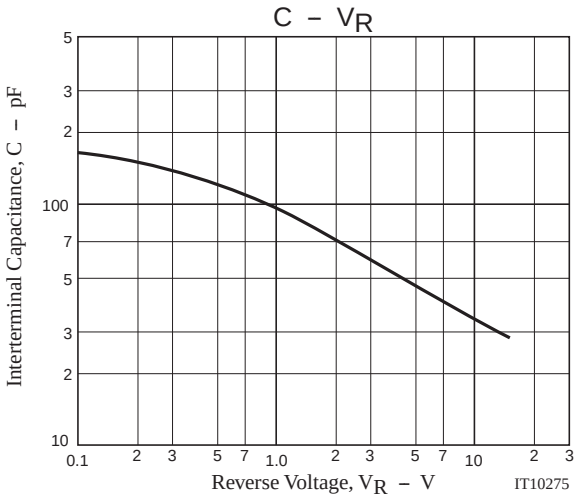


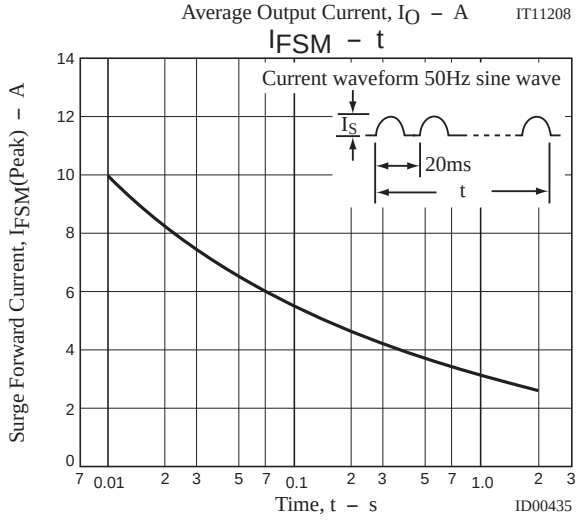







Tc – IO
(1)Rectangular wave θ=60°
(2)Rectangular wave θ=120°
(3)Rectangular wave θ=180°
(4)Sine wave θ=180°
*When mounted in reliability operaion board, Rth(J-a)=183.67°C/W
Rectangular wave
θ
360°
Sine wave
180°
360°
(1)
(2)
(3)
(4)
Case Temperature, Tc – °C
Average Output Current, IO – A
IT11208


C – VR
Interterminal Capacitance, C – pF
Reverse Voltage, VR – V
IT10275


IFSM – t
Current waveform 50Hz sine wave
IS
20ms
t
Surge Forward Current, IFSM(Peak) – A
Time, t – s
ID00435

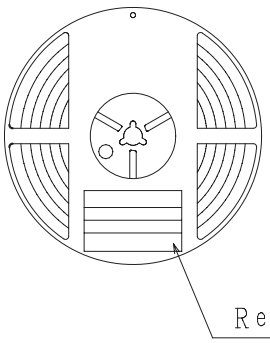
Taping Specification

SB10015M-TL-E

1. Packing Format

Package Name	Carrier Tape Type	Maximun 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

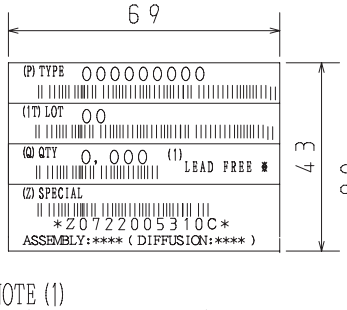
Packing method



Reel label

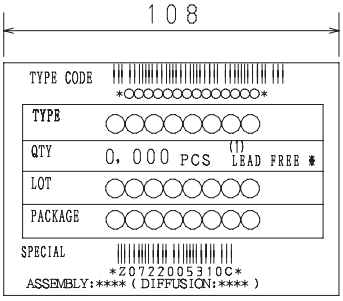
Reel label, Inner box label

(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.

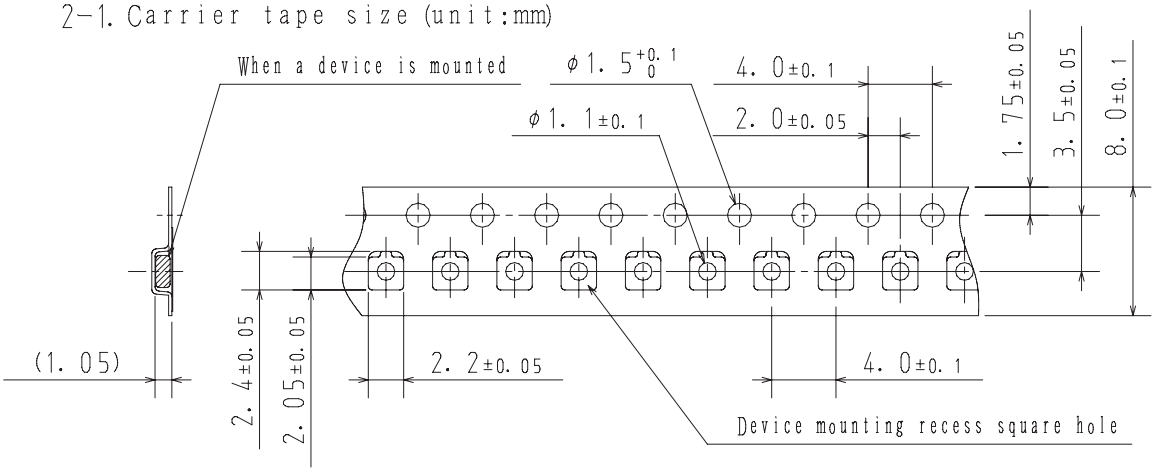


NOTE (1)
The LEAD FREE ※ description shows that the surface treatment of the terminal is lead free.

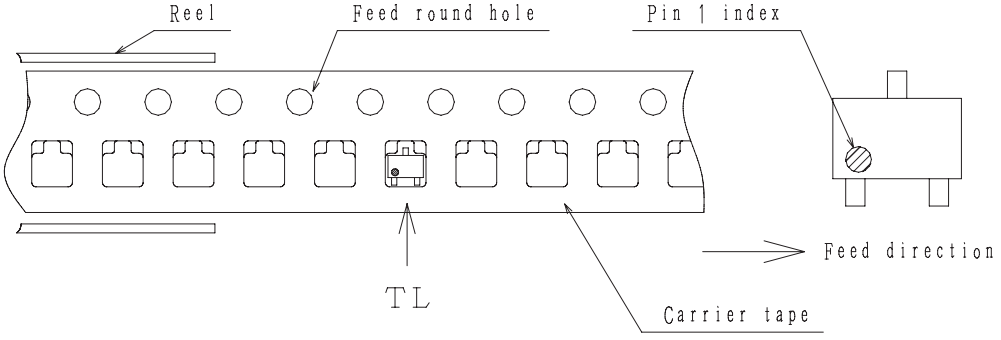
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



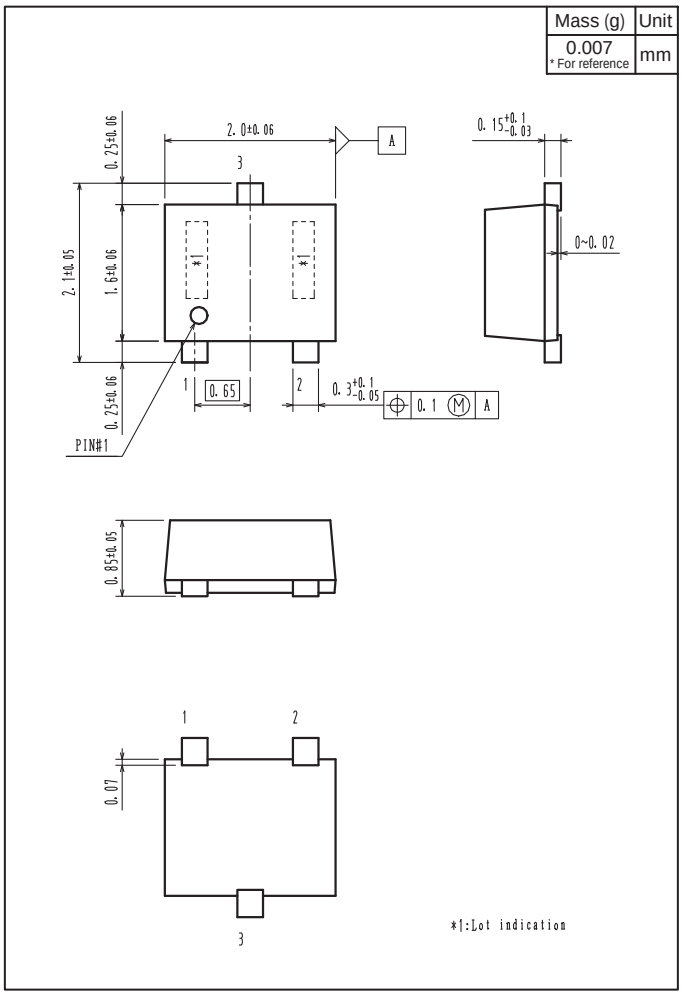
2-2. Device placement direction



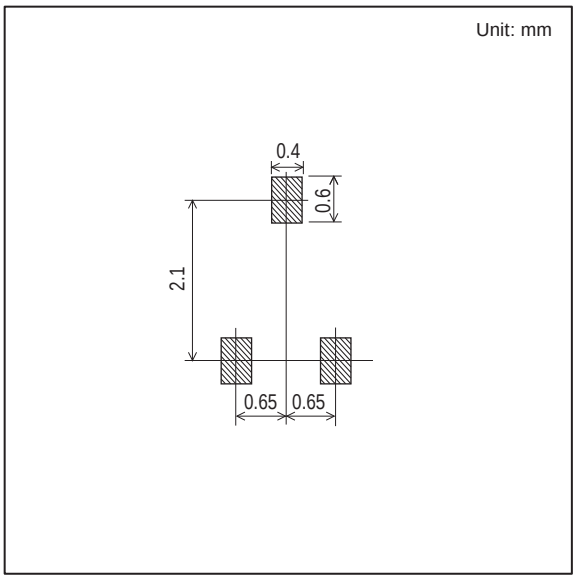
Those with pin 1 index on the feed hole side·····TL

Outline Drawing

SB10015M-TL-E



Land Pattern Example



This catalog provides information as of September, 2012. Specifications and information herein are subject to change without notice.