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SB2003M

Schottky Barrier Diode 30V, 2A, Low IR, Single MCPH6

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

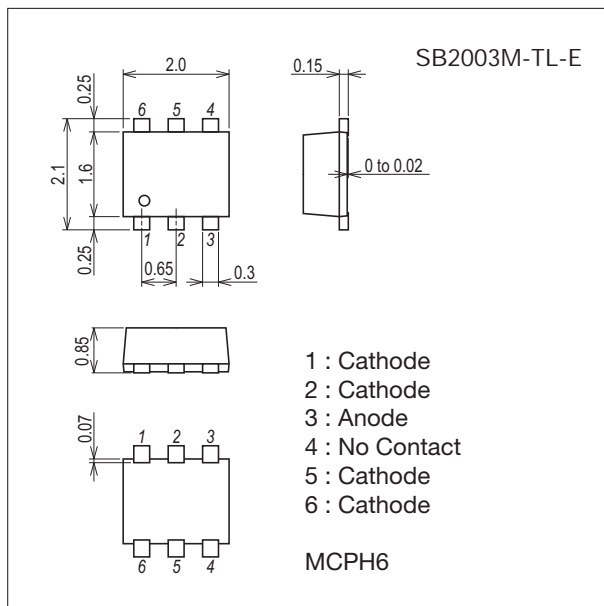
Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	V_{RRM}		30	V
Nonrepetitive Peak Reverse Surge Voltage	V_{RSM}		35	V
Average Output Current	I_O		2.0	A
Surge Forward Current	I_{FSM}	50Hz sine wave, 1 cycle	10	A
Junction Temperature	T_J		-55 to +125	°C
Storage Temperature	T_{stg}		-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)

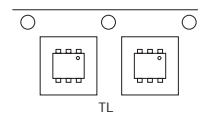
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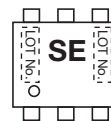
Product & Package Information

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

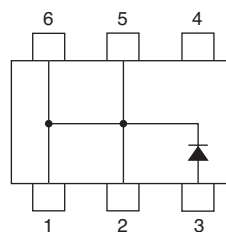
Packing Type : TL



Marking



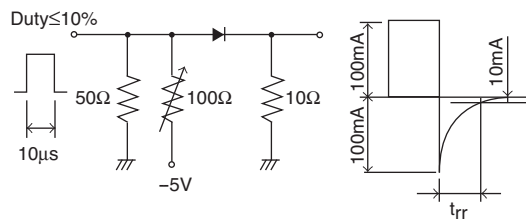
Electrical Connection



Electrical Characteristics at Ta=25°C

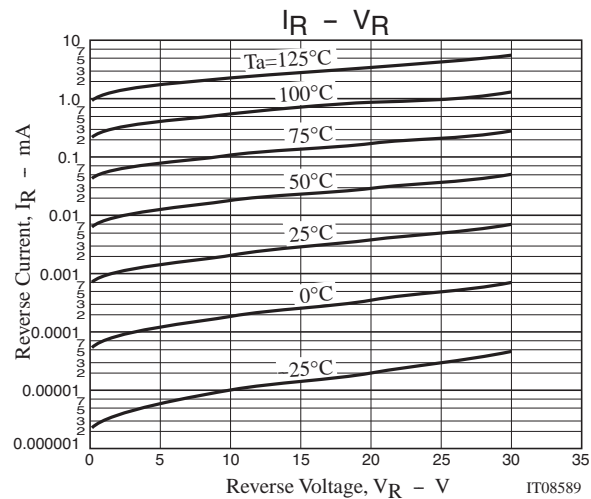
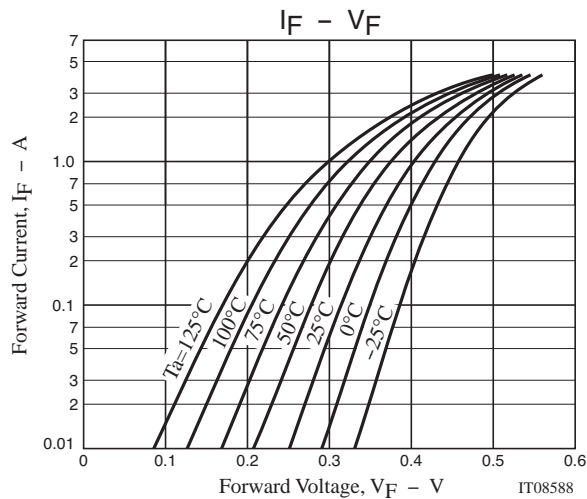
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V_R	$I_R=0.2\text{mA}$	30			V
Forward Voltage	V_F	$I_F=1.0\text{A}$		0.40	0.45	V
		$I_F=2.0\text{A}$		0.45	0.50	V
Reverse Current	I_R	$V_R=15\text{V}$			30	μA
Interterminal Capacitance	C	$V_R=10\text{V}$, $f=1\text{MHz}$		75		pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=100\text{mA}$, See specified Test Circuit.			20	ns
Thermal Resistance	$R_{th(j-a)1}$	When mounted in Cu-foiled area of 1.44mm ² ×0.03mm on glass epoxy substrate		93.4		°C / W
	$R_{th(j-a)2}$	When mounted on ceramic substrate (500mm ² ×0.8mm)		71.4		°C / W

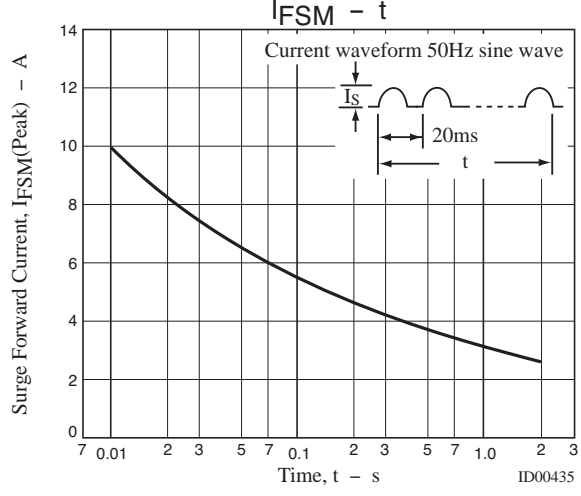
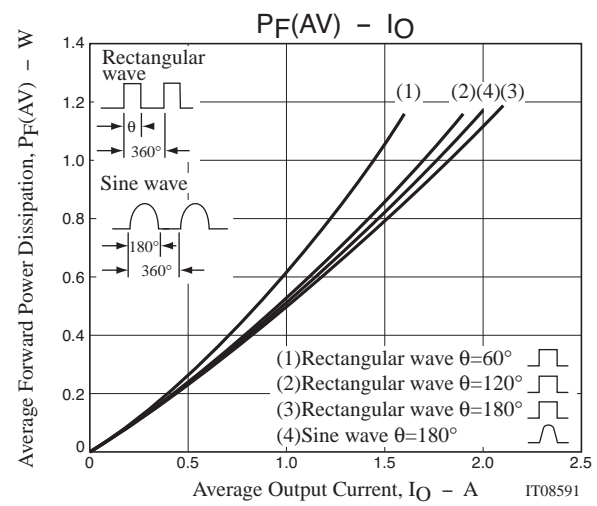
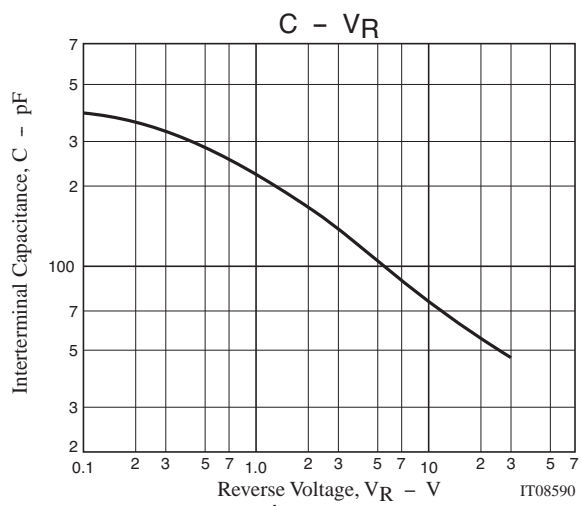
t_{rr} Test Cicuit



Ordering Information

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





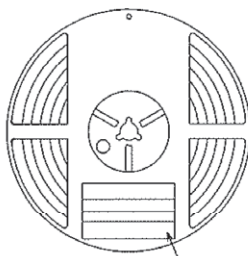
Embossed Taping Specification

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

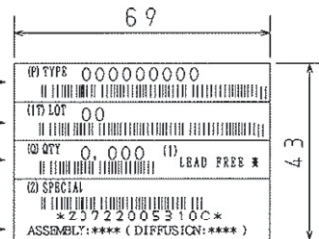
Packing method



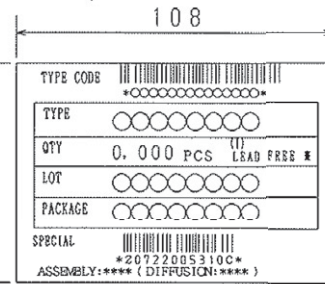
Type No.
LOT No.
Quantity
Origin

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.



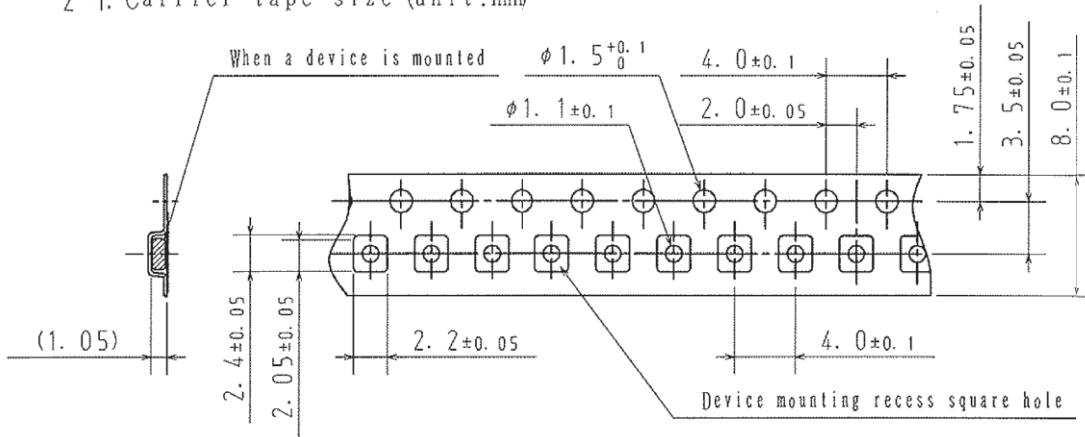
NOTE (1)

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

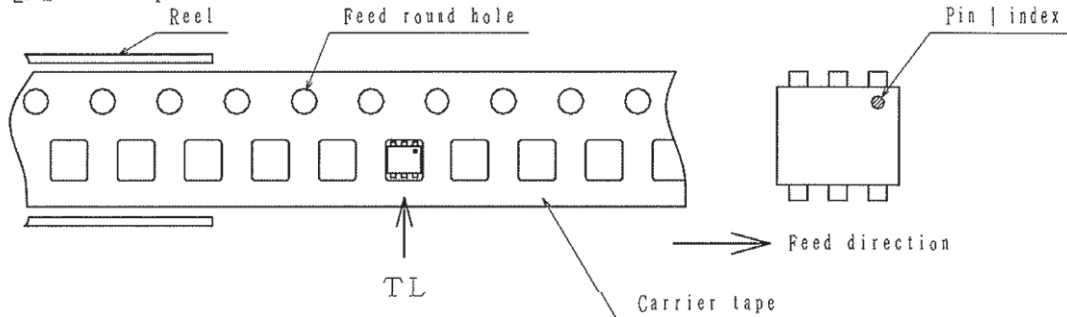
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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

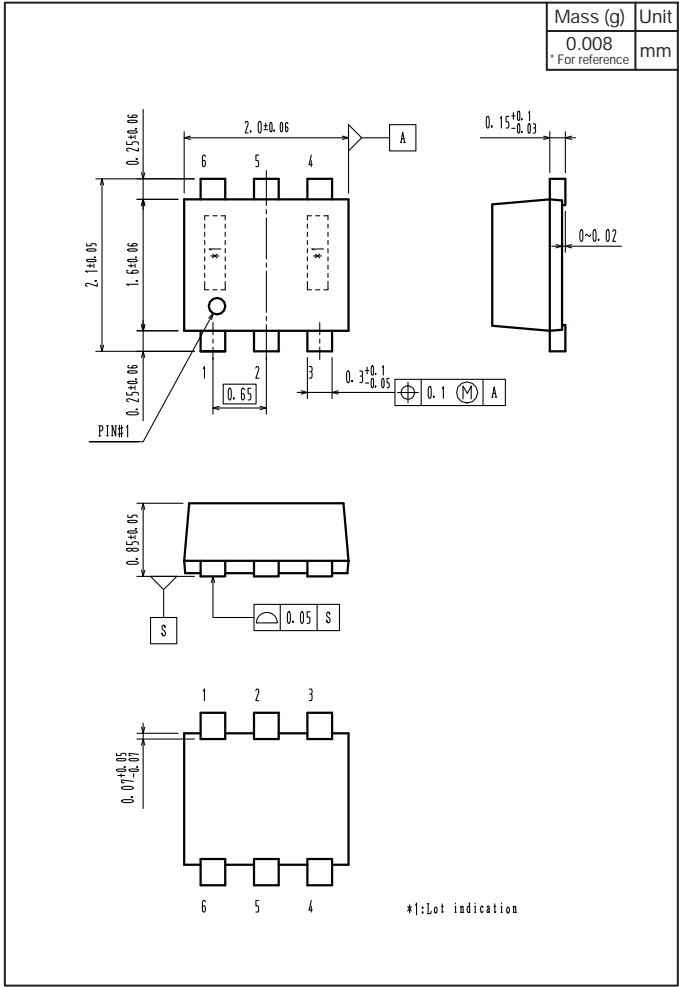


2-2. Device placement direction

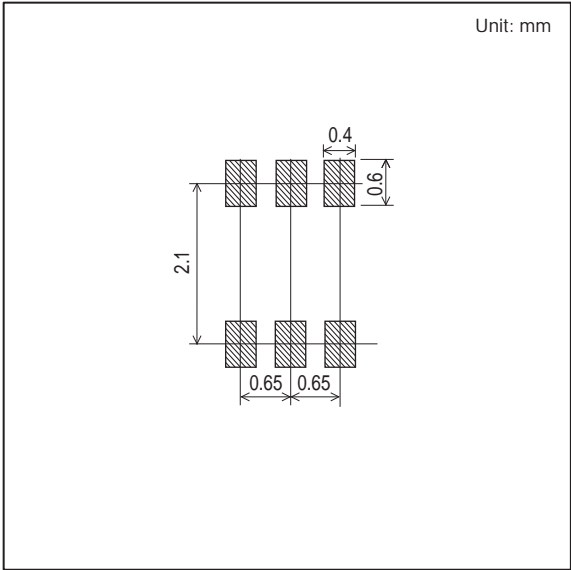


Those with pin 1 index on the feed hole side.....TL

Outline Drawing
SB2003M-TL-E



Land Pattern Example



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