



ON Semiconductor®

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# SB1003M3

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

### 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)
- Halogen free compliance

### Specifications

#### Absolute Maximum Ratings at Ta=25°C

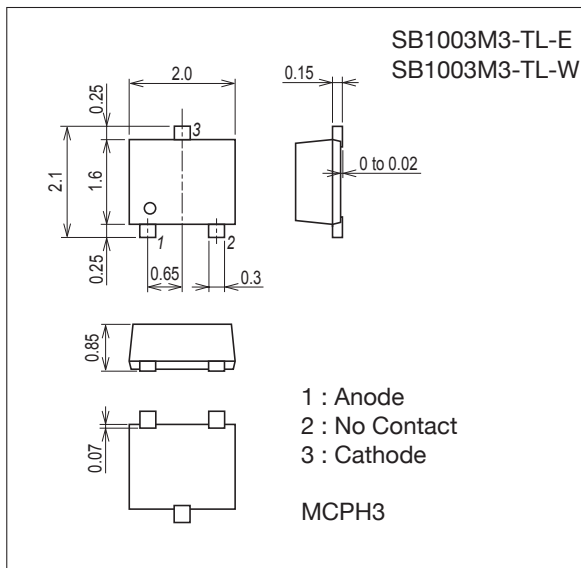
Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	VRRM		30	V
Nonrepetitive Peak Reverse Surge Voltage	VRSM		35	V
Average Output Current	IO		1.0	A
Surge Forward Current	IFSM	50Hz sine wave, 1 cycle	10	A
Junction Temperature	TJ		-55 to +125	°C
Storage Temperature	Tstg		-55 to +125	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

### Package Dimensions

unit : mm (typ)

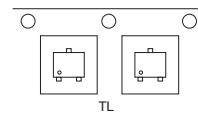
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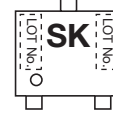
### Product & Package Information

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

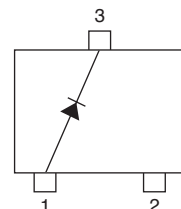
### Packing Type : TL



### Marking



### Electrical Connection



### ORDERING INFORMATION

See detailed ordering and shipping information on page 2 of this data sheet.

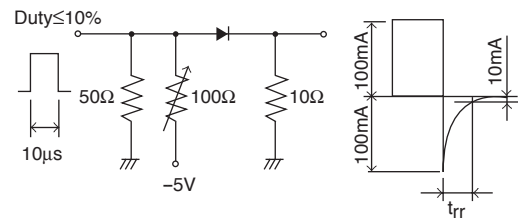
# SB1003M3

## 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

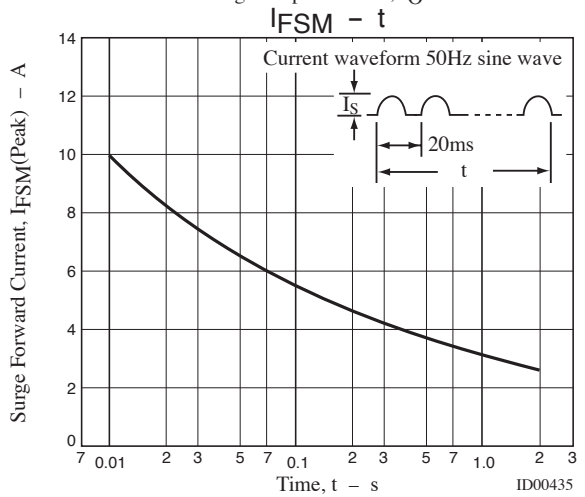
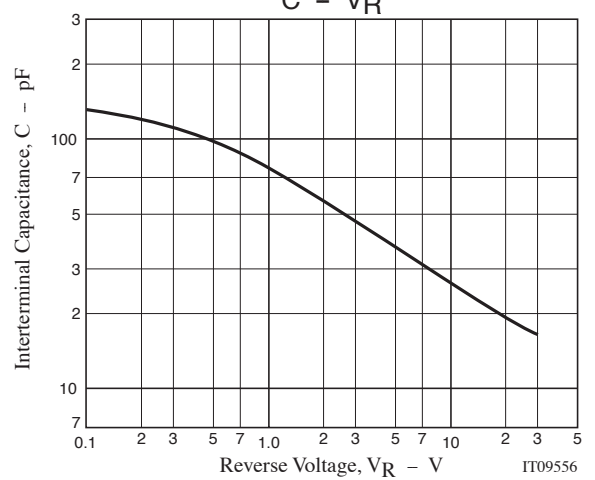
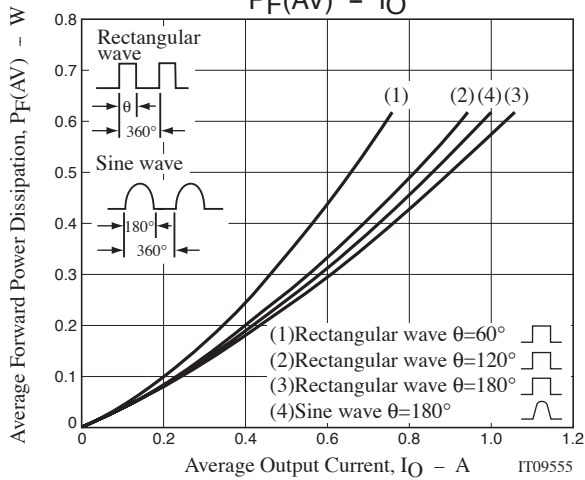
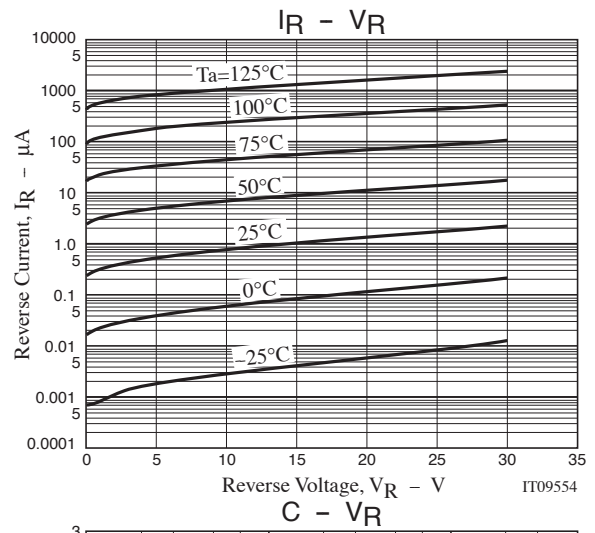
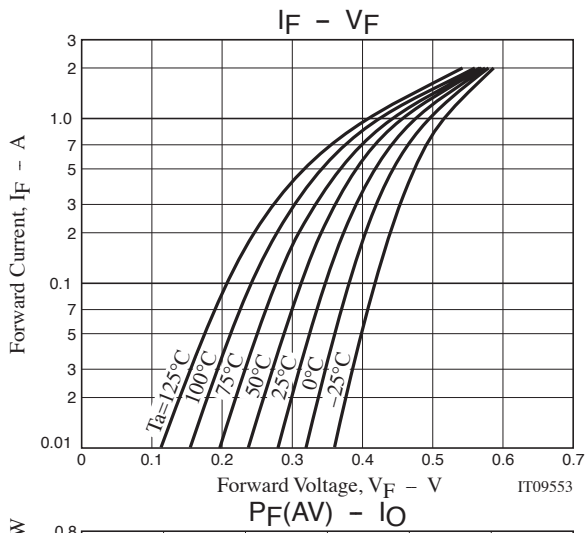
Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

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



## Ordering Information

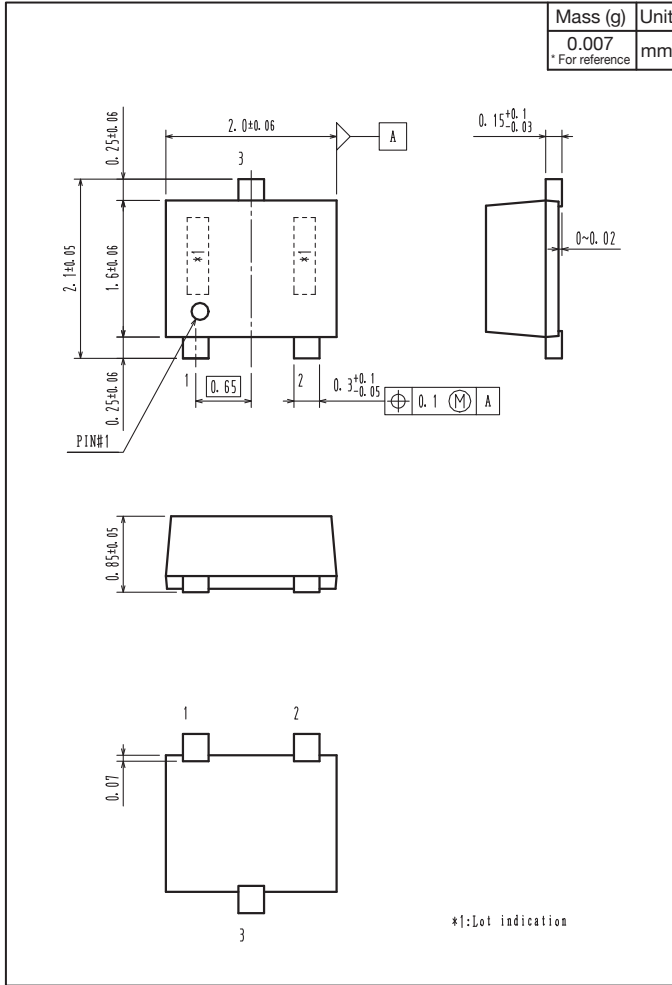
Device	Package	Shipping	memo
SB1003M3-TL-E	MCPH3	3,000pcs./reel	Pb-Free
SB1003M3-TL-W	MCPH3	3,000pcs./reel	Pb-Free and Halogen Free



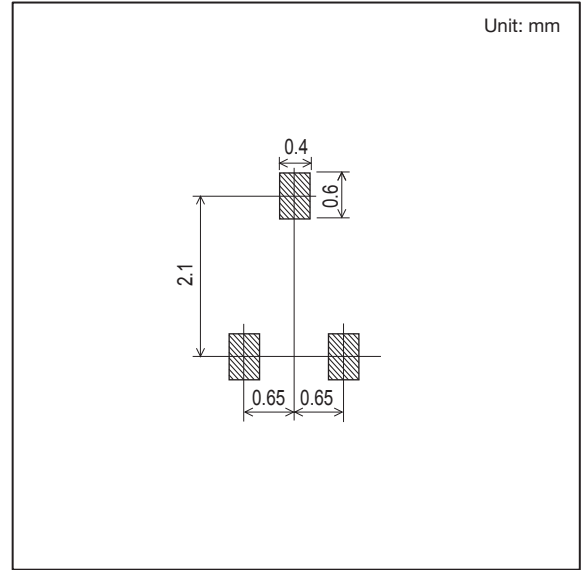
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## Outline Drawing

SB1003M3-TL-E, SB1003M3-TL-W



## Land Pattern Example



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