



# SB3003CH

# Schottky Barrier Diode

## 30V, 3A, Low IR, Single CPH6

ON Semiconductor®

<http://onsemi.com>

## 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 0.9mm)

## Specifications

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

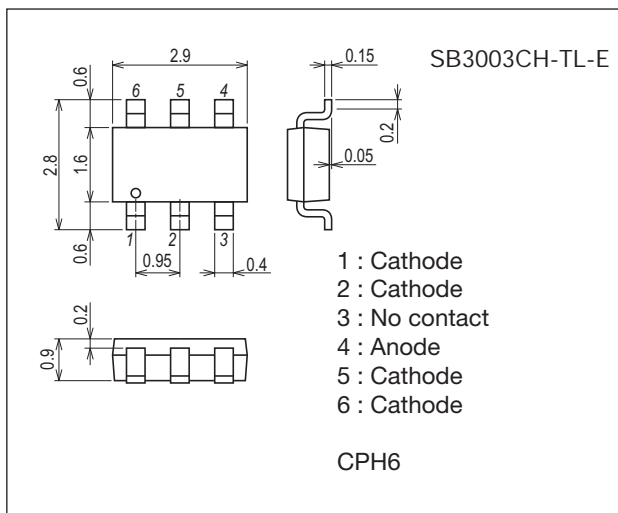
Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	VRRM		30	V
Nonrepetitive Peak Reverse Surge Voltage	VRSM		35	V
Average Output Current	I <sub>O</sub>		3.0	A
Surge Forward Current	I <sub>FSM</sub>	50Hz sine wave, 1 cycle	20	A
Junction Temperature	T <sub>J</sub>		-55 to +125	°C
Storage Temperature	T <sub>stg</sub>		-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)

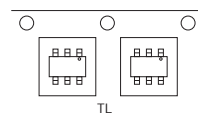
7018A-012



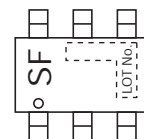
## Product & Package Information

- Package : CPH6
- JEITA, JEDEC : SC-74, SOT-26, SOT-457
- Minimum Packing Quantity : 3,000 pcs./reel

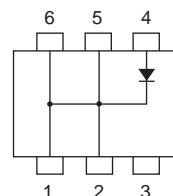
## Packing Type: TL



## Marking



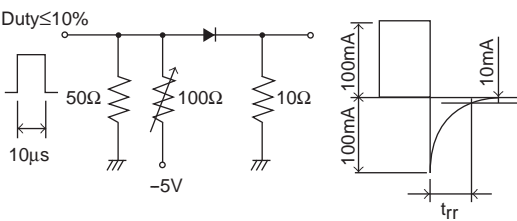
## Electrical Connection



Electrical Characteristics at Ta=25°C

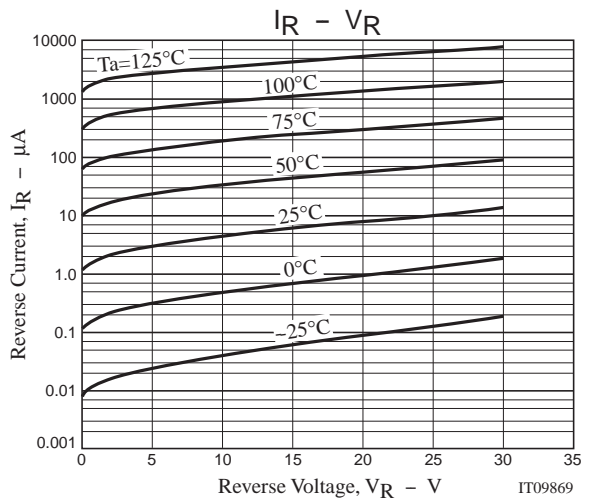
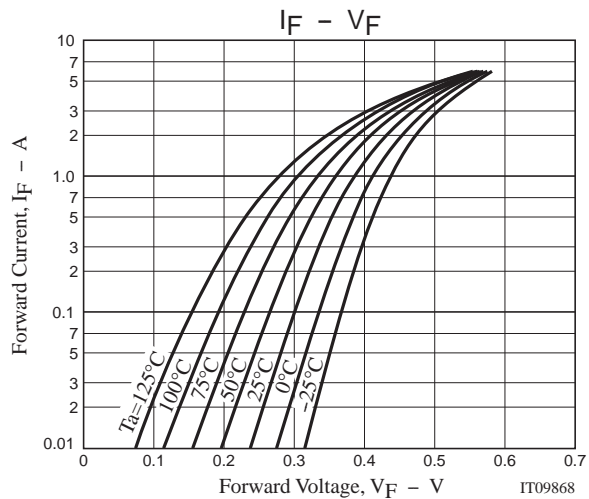
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	$V_R$	$I_R=0.5\text{mA}$	30			V
Forward Voltage	$V_{F1}$	$I_F=2.0\text{A}$		0.435	0.485	V
	$V_{F2}$	$I_F=3.0\text{A}$		0.47	0.52	V
Reverse Current	$I_R$	$V_R=15\text{V}$			42	$\mu\text{A}$
Interterminal Capacitance	C	$V_R=10\text{V}$ , $f=1\text{MHz}$		90		pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=100\text{mA}$ , See specified Test Circuit.			20	ns
Thermal Resistance	$R_{th(j-a)}$	When mounted on ceramic substrate (900mm <sup>2</sup> ×0.8mm)		50		°C / W

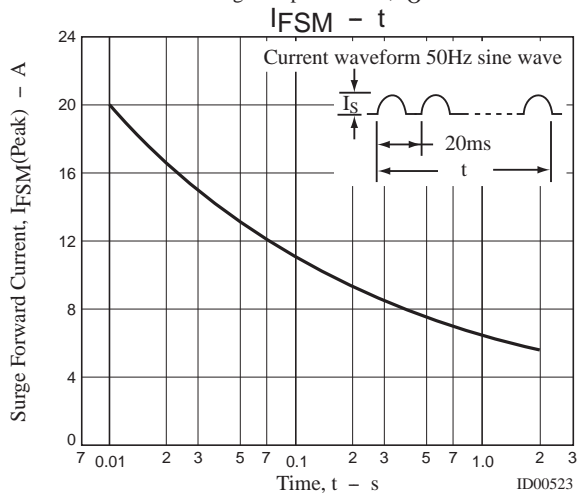
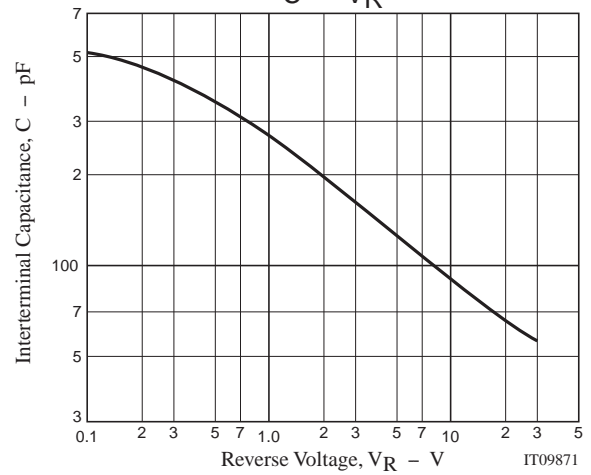
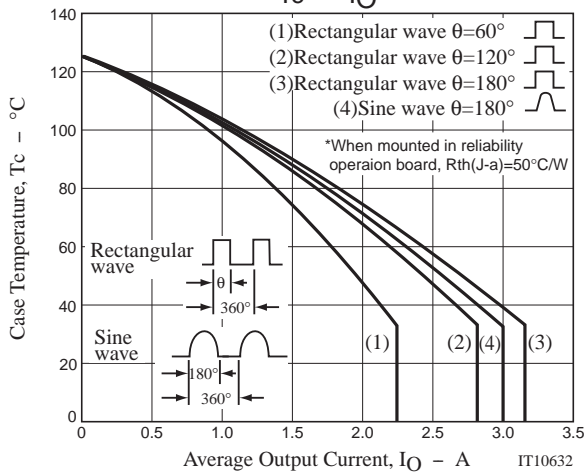
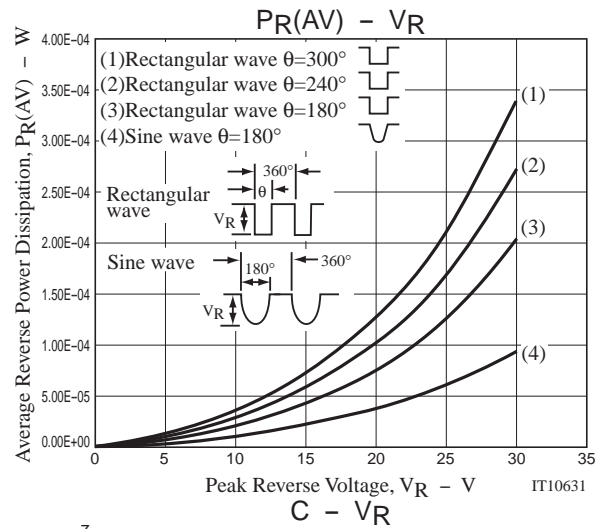
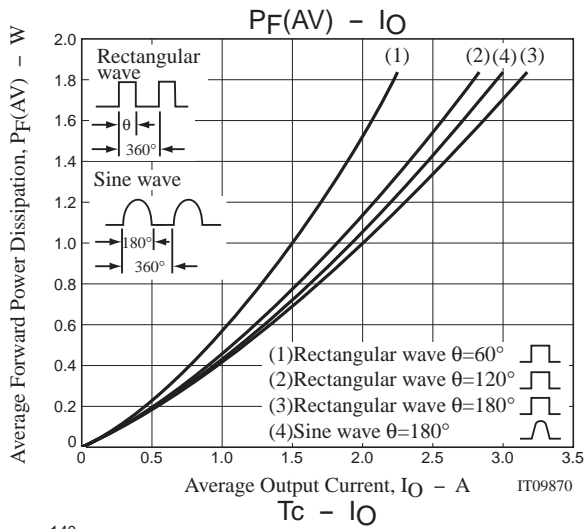
t<sub>rr</sub> Test Cicuit



Ordering Information

Device	Package	Shipping	memo
SB3003CH-TL-E	CPH6	3,000pcs./reel	Pb Free





## Embossed Taping Specification

SB3003CH-TL-E

## 1. Packing Format

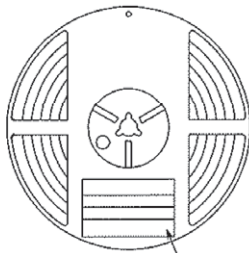
Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
CPH6	CPH6	3,000	15,000	90,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

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



Reel label

Type No.  
LOT No.  
Quantity  
Origin

TYPE	000000000
LOT	00
QTY	0,000 (1) LEAD FREE *
SPECIAL	*20722005310C*
ASSEMBLY	**** (DIFFUSION:****)

TYPE CODE	*****
TYPE	*****
QTY	0,000 PCS (1) LEAD FREE *
LOT	*****
PACKAGE	*****
SPECIAL	*20722005310C*
ASSEMBLY	**** (DIFFUSION:****)

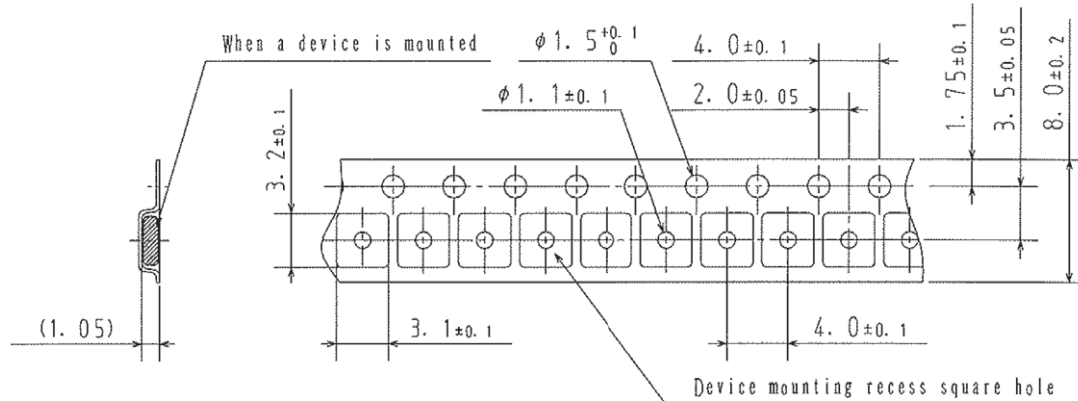
NOTE (1)

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

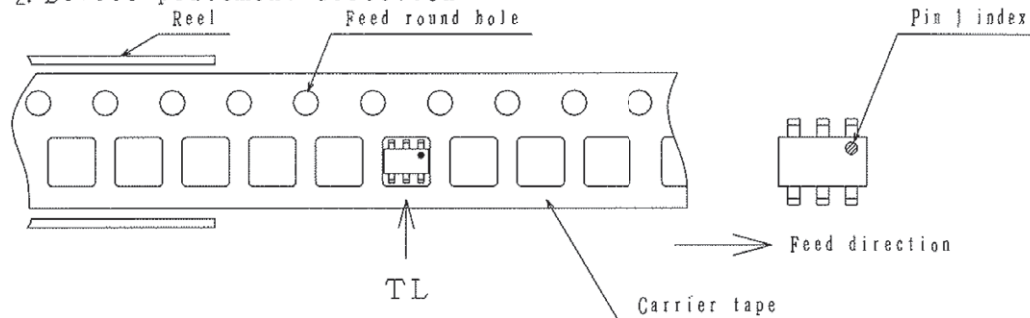
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

## 2. Taping configuration

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



## 2-2. Device placement direction



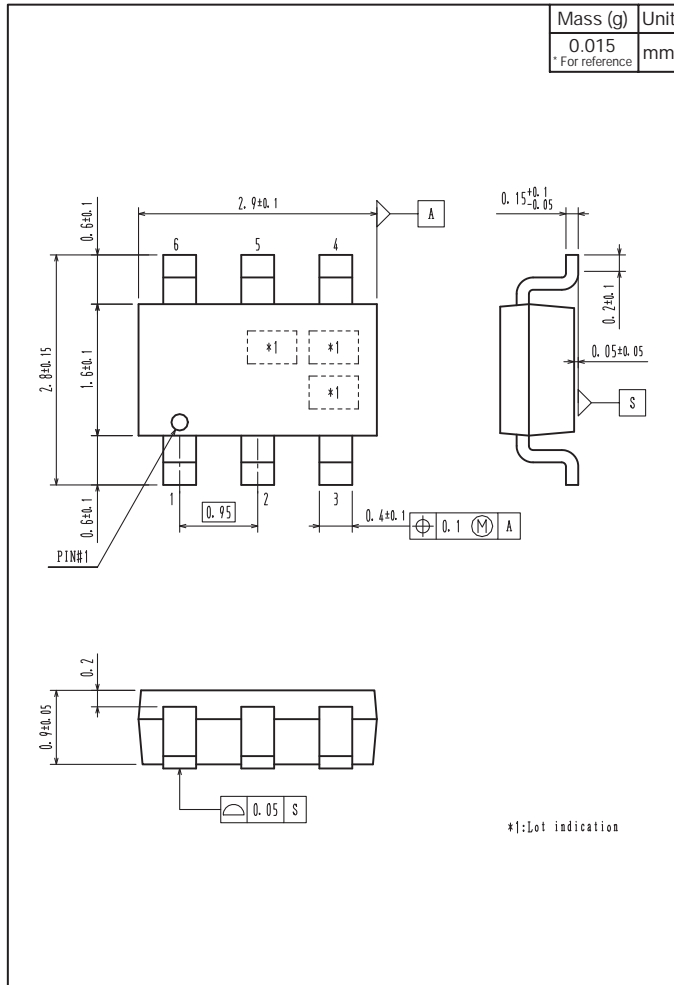
Those with pin 1 index on the feed hole side.....TL

## Outline Drawing

SB3003CH-TL-E

Technical drawing of a 2x3 grid of rectangles. The drawing shows two rows of three rectangles each. The rectangles are shaded with diagonal lines. The dimensions are indicated as follows:

- Horizontal spacing: The distance between the center lines of the first and second rectangles in the bottom row is 0.95. The distance between the center lines of the second and third rectangles in the bottom row is 0.95.
- Vertical spacing: The distance between the center lines of the top and bottom rows is 2.4.
- Rectangle dimensions: The width of each rectangle is 0.6. The height of each rectangle is 1.4.



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