



SANYO Semiconductors

## DATA SHEET

An ON Semiconductor Company

# SB20-03P — Schottky Barrier Diode

## 30V, 2A Rectifier

### Applications

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

### Features

- Low forward voltage ( $V_F$  max=0.55V)
- Low switching noise
- Low leakage current and high reliability due to highly reliable planar structure
- Fast reverse recovery time ( $t_{rr}$  max=20ns)

### Specifications

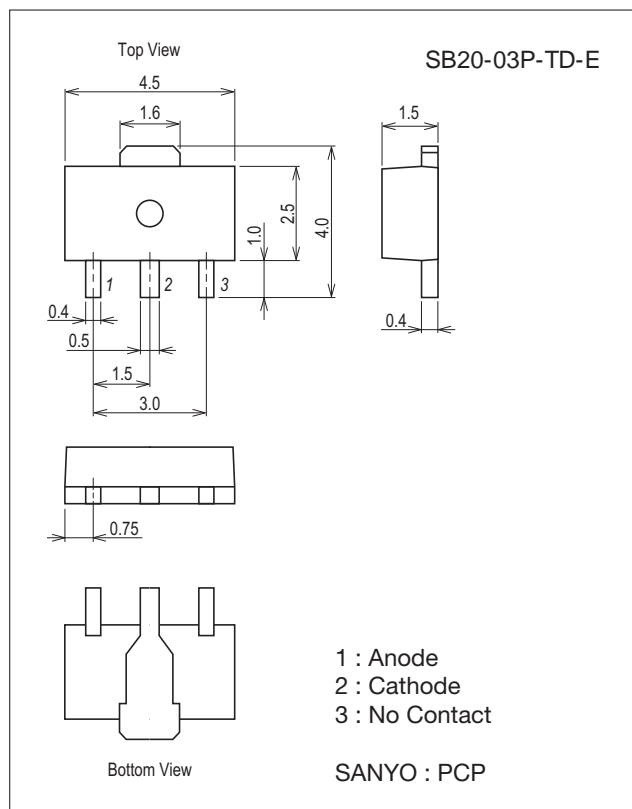
Absolute Maximum Ratings at  $T_a=25^\circ\text{C}$ 

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	A
Surge Forward Current	$I_{FSM}$	50Hz sine wave, 1 cycle	20	A
Junction Temperature	$T_j$		-55 to +125	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +125	$^\circ\text{C}$

### Package Dimensions

unit : mm (typ)

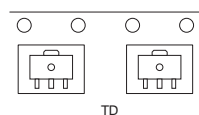
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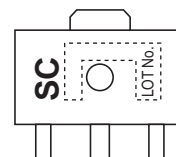
### Product & Package Information

- Package : PCP
- JEITA, JEDEC : SC-62, SOT-89, TO-243
- Minimum Packing Quantity : 1,000 pcs./reel

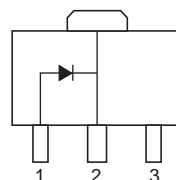
### Packing Type: TD



### Marking



### Electrical Connection

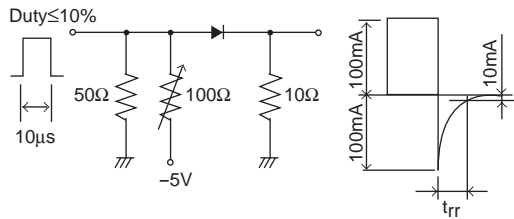


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Electrical Characteristics at Ta=25°C

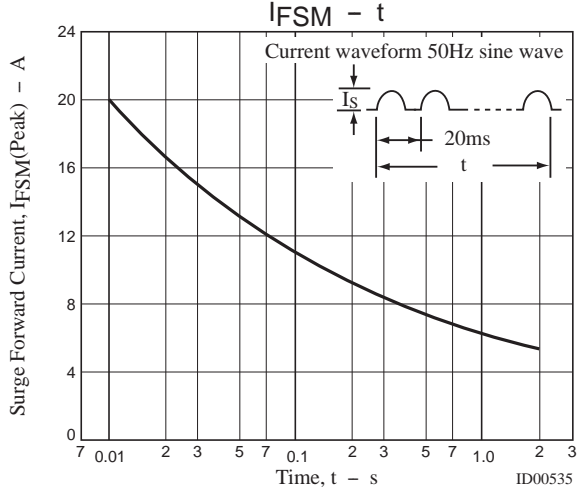
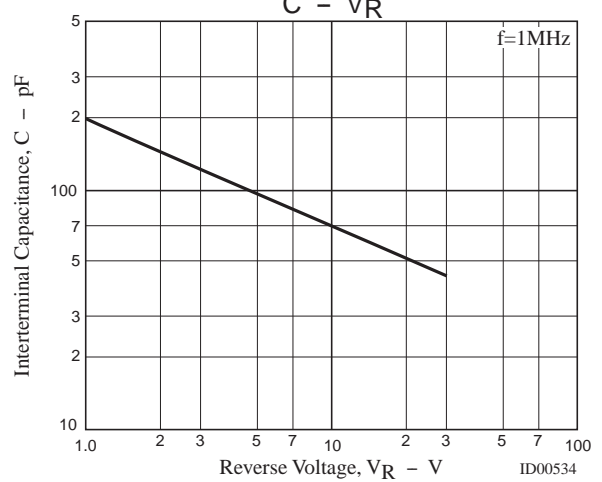
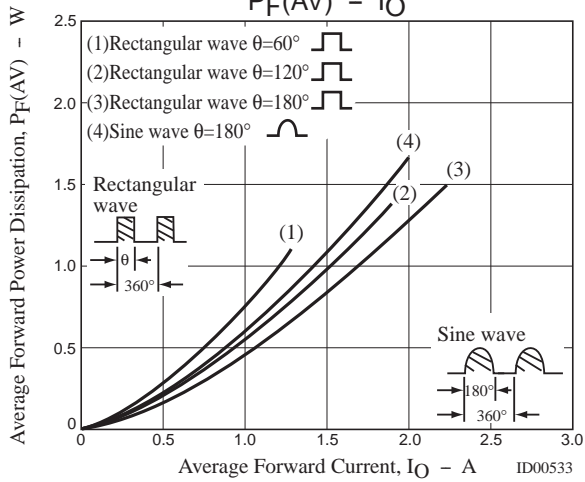
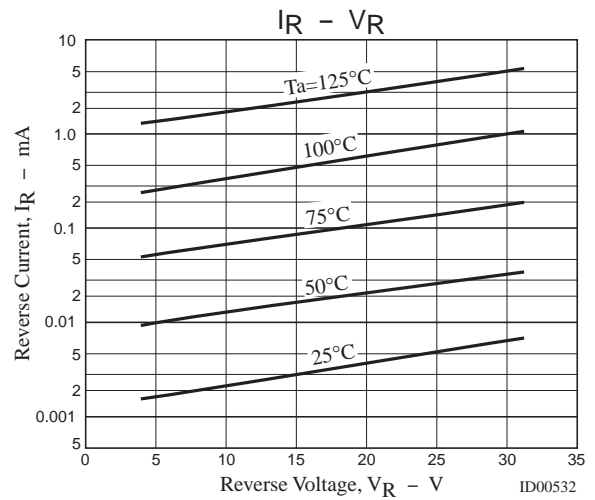
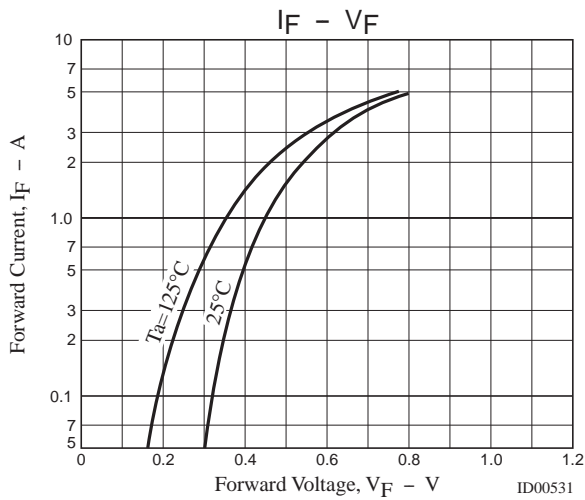
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	$V_R$	$I_R=500\mu A$	30			V
Forward Voltage	$V_F$	$I_F=2A$			0.55	V
Reverse Current	$I_R$	$V_R=15V$			100	$\mu A$
Interterminal Capacitance	C	$V_R=10V, f=1MHz$		70		pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=100mA$ , See specified Test Circuit.			20	ns
Thermal Resistance	$R_{th(j-a)1}$			300		$^{\circ}C / W$
	$R_{th(j-a)2}$	When mounted on ceramic substrate (250mm <sup>2</sup> ×0.8mm)		110		$^{\circ}C / W$

t<sub>rr</sub> Test Circuit



Ordering Information

Device	Package	Shipping	memo
SB20-03P-TD-E	PCP	1,000pcs./reel	Pb Free



## Embossed Taping Specification

SB20-03P-TD-E

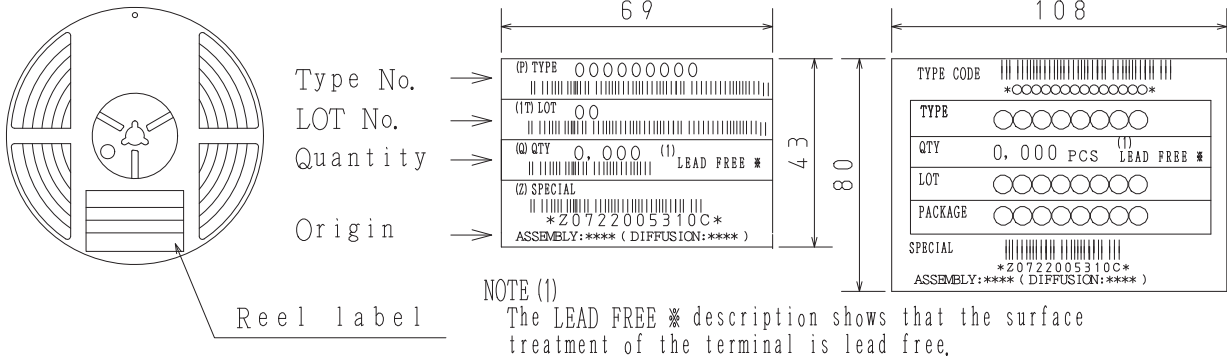
## 1. Packing Format

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)
PCP	PCP	1,000	4,000	24,000	4 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.

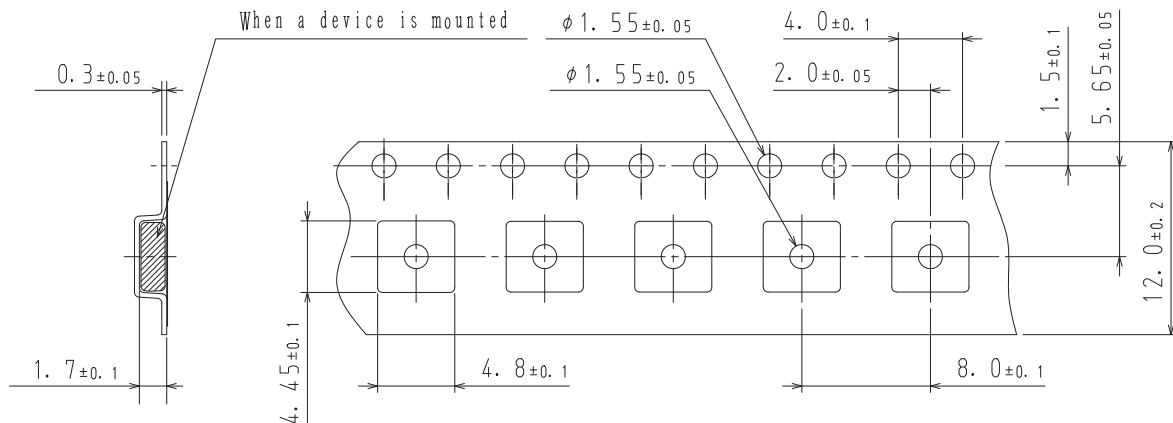
## Packing method



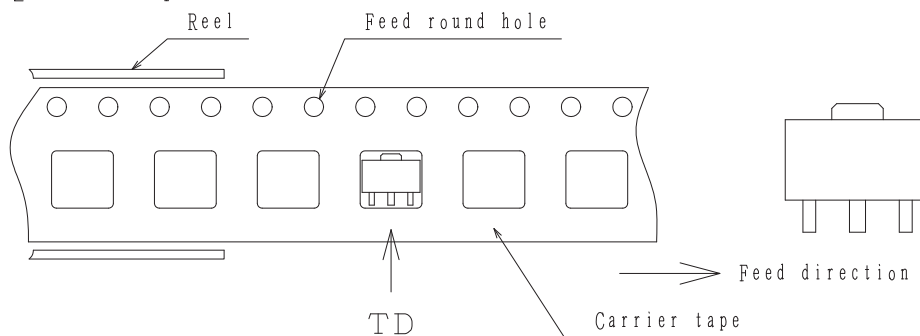
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

## 2. Taping configuration

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



## 2-2. Device placement direction

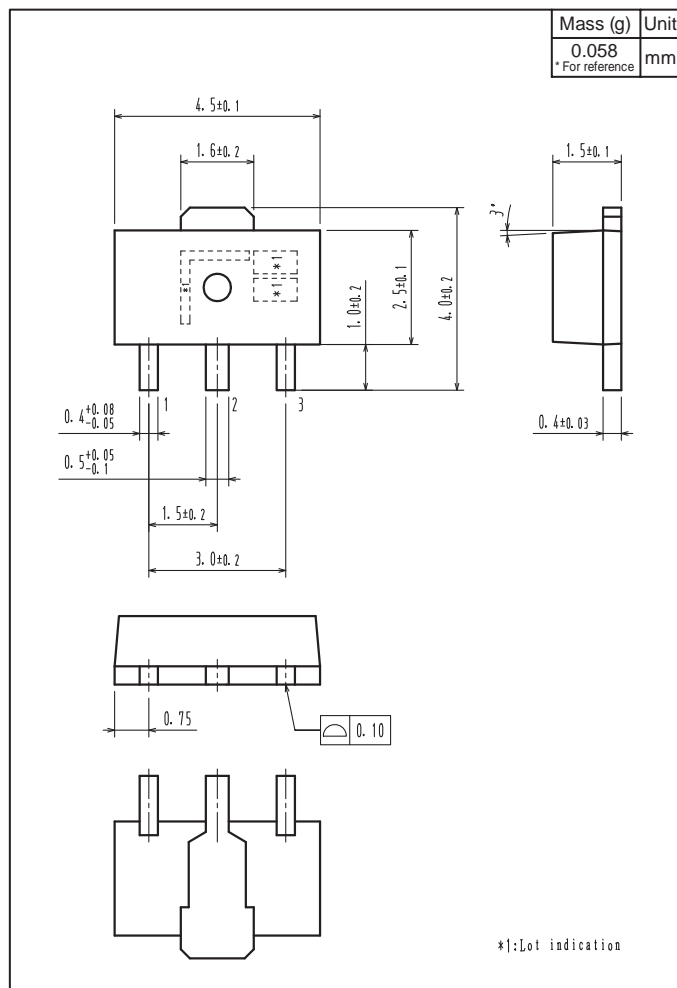


Those with pin 1 index on the feed hole side.....TD

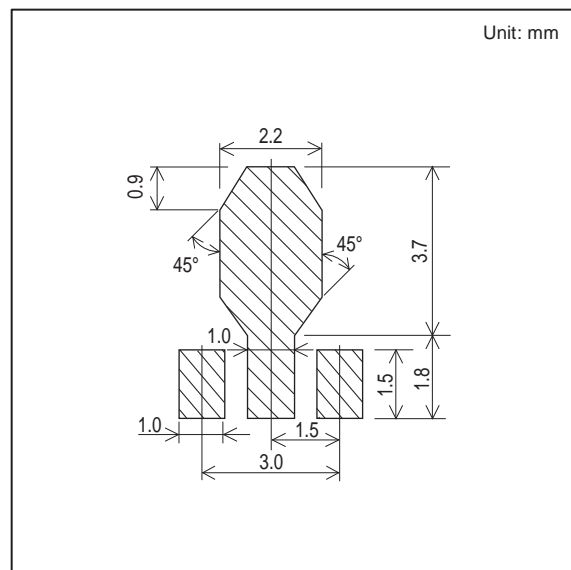
**SB20-03P**

## Outline Drawing

SB20-03P-TD-E



### Land Pattern Example



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