



SANYO Semiconductors

# DATA SHEET

An ON Semiconductor Company

## SB05-05P — Schottky Barrier Diode 50V, 500mA 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=10ns)

### Specifications

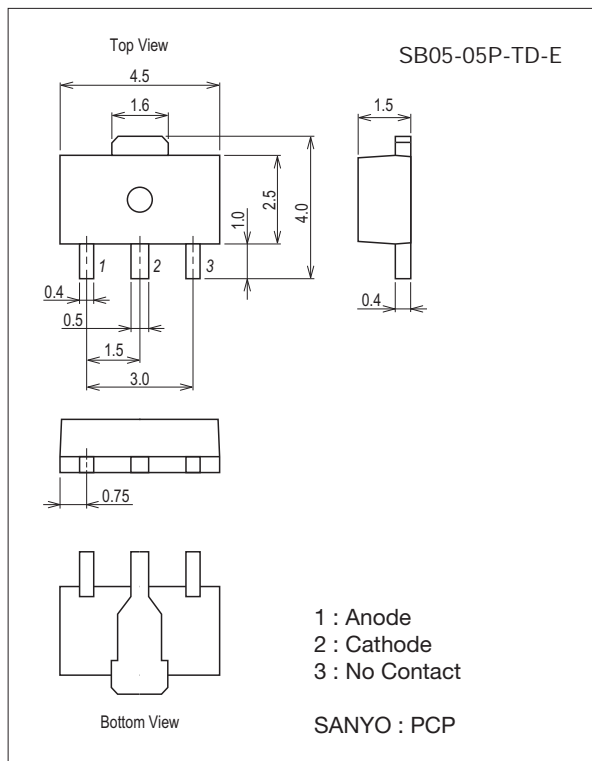
Absolute Maximum Ratings at  $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$		50	V
Nonrepetitive Peak Reverse Surge Voltage	$V_{RSM}$		55	V
Average Output Current	$I_O$		500	mA
Surge Forward Current	$I_{FSM}$	50Hz sine wave, 1 cycle	5	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)

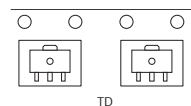
7007B-001



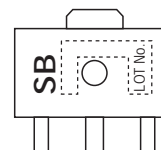
### Product & Package Information

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

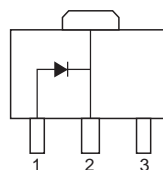
### Packing Type: TD



### Marking



### Electrical Connection

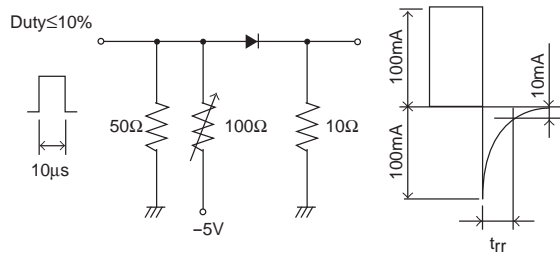


# SB05-05P

## Electrical Characteristics at $T_a=25^\circ\text{C}$

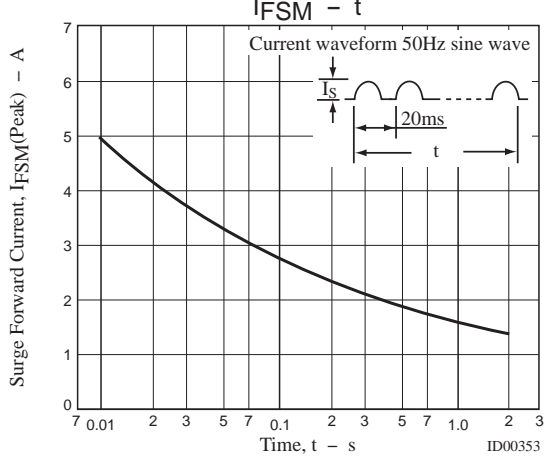
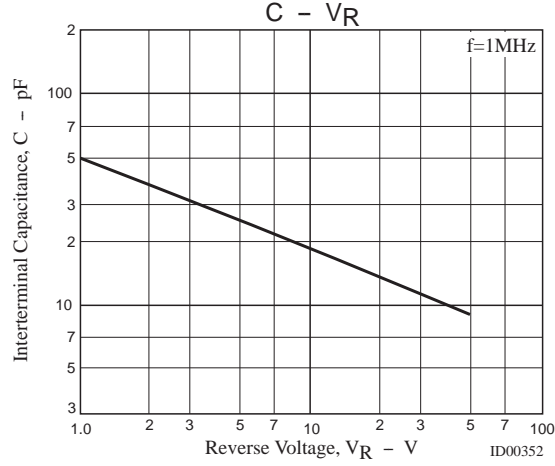
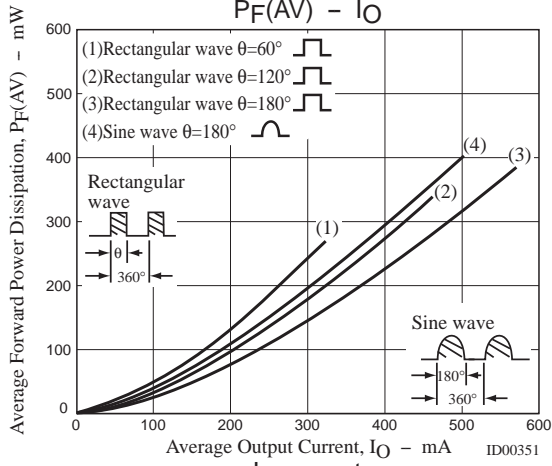
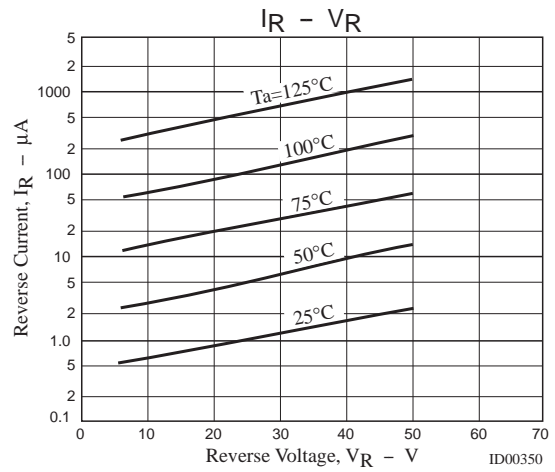
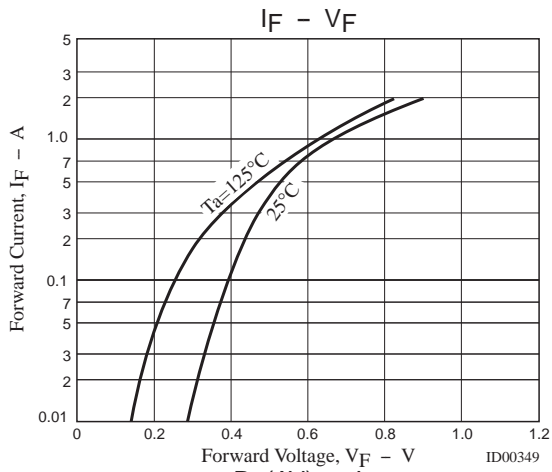
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	$V_R$	$I_R=200\mu\text{A}$	50			V
Forward Voltage	$V_F$	$I_F=500\text{mA}$			0.55	V
Reverse Current	$I_R$	$V_R=25\text{V}$			50	$\mu\text{A}$
Interterminal Capacitance	C	$V_R=10\text{V}$ , $f=1\text{MHz}$		18		pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=100\text{mA}$ , See specified Test Circuit.			10	ns
Thermal Resistance	Rth(j-a)1			310		$^\circ\text{C} / \text{W}$
	Rth(j-a)2	When mounted on ceramic substrate (250mm <sup>2</sup> ×0.8mm)		120		$^\circ\text{C} / \text{W}$

### $t_{rr}$ Test Circuit



### Ordering Information

Device	Package	Shipping	memo
SB05-05P-TD-E	PCP	1,000pcs./reel	Pb Free



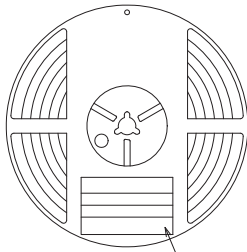
Embossed Taping Specification

SB05-05P-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

Packing method



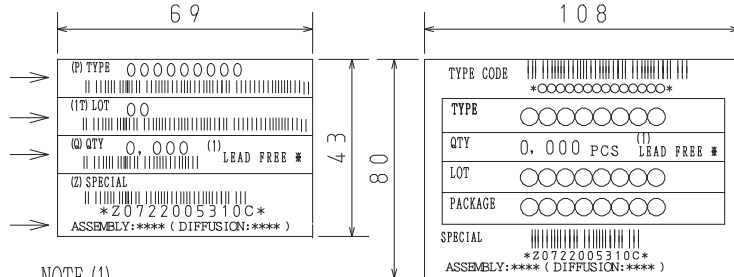
Type No.  
LOT No.  
Quantity  
Origin

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.



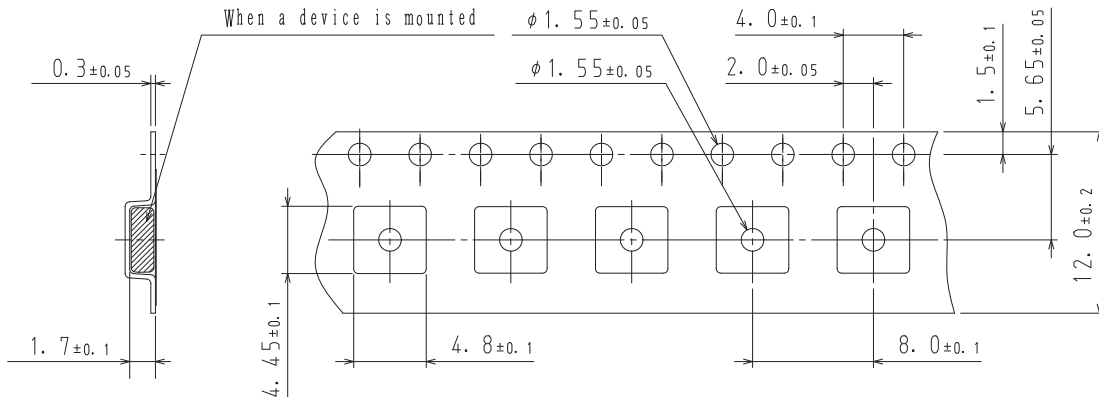
NOTE (1)

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

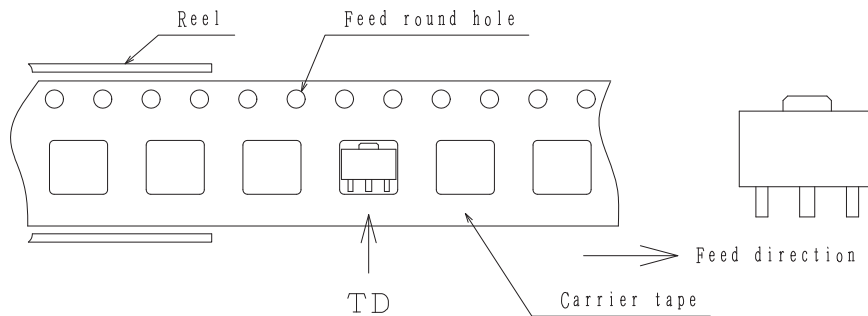
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



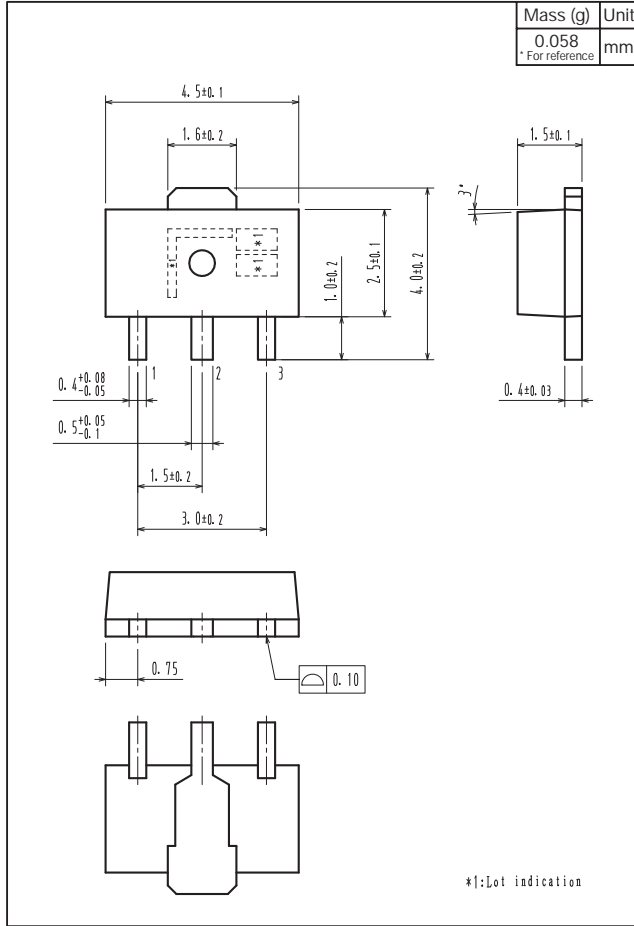
2-2. Device placement direction



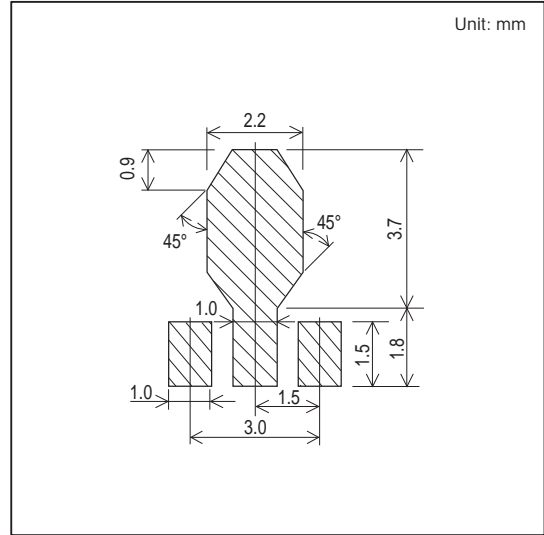
Those with pin 1 index on the feed hole side.....TD

Outline Drawing

SB05-05P-TD-E



Land Pattern Example



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