



# SB05-05C — Schottky Barrier Diode 50V, 500mA Rectifier

## Applications

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

## Features

- Low forward voltage ( $V_F \text{ max}=0.55\text{V}$ )
- Low switching noise
- Low leakage current and high reliability due to highly reliable planar structure
- Fast reverse recovery time ( $t_{rr} \text{ max}=10\text{ns}$ )

## Specifications

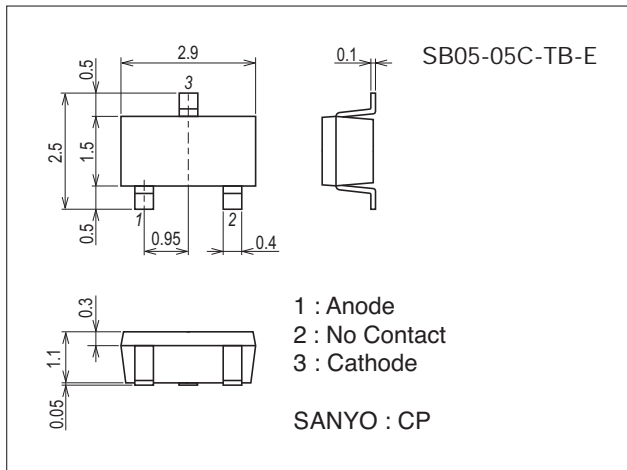
Absolute Maximum Ratings at  $T_a=25^\circ\text{C}$

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)

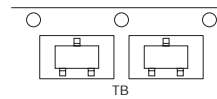
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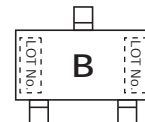
## Product & Package Information

- Package : CP
- JEITA, JEDEC : SC-59, TO-236, SOT-23, TO-236AB
- Minimum Packing Quantity : 3,000 pcs./reel

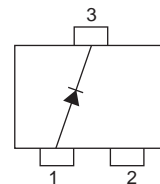
## Packing Type: TB



## Marking



## Electrical Connection

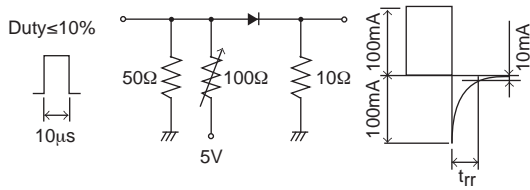


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## Electrical Characteristics at Ta=25°C

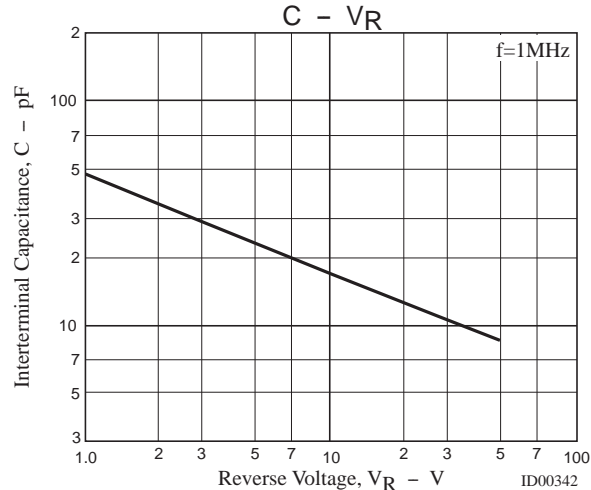
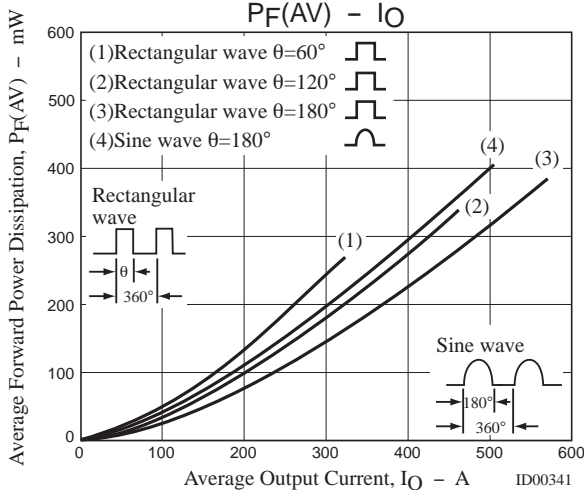
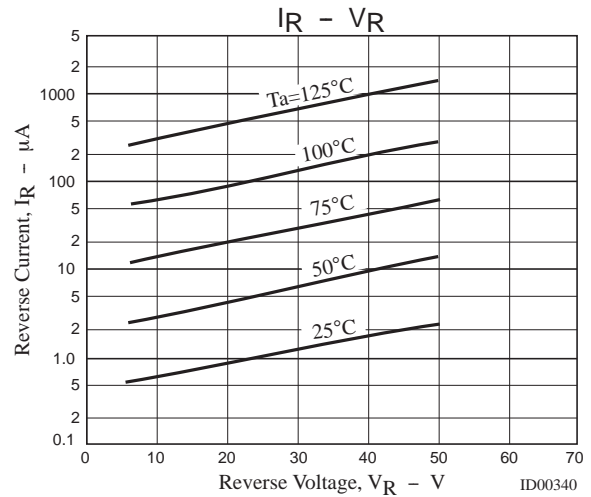
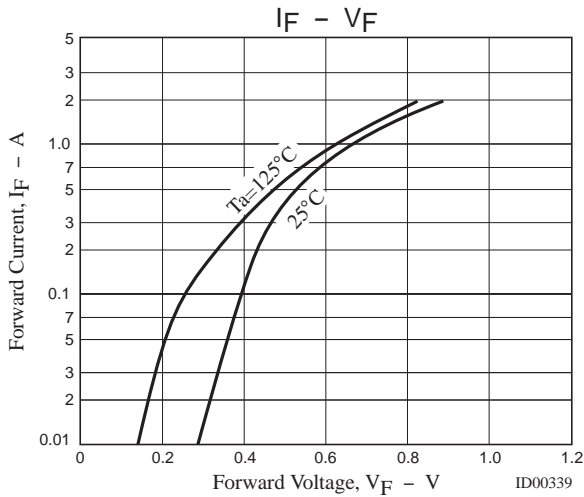
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	$V_R$	$I_R=200\mu A, T_J=25^\circ C$	50			V
Forward Voltage	$V_F$	$I_F=500mA, T_J=25^\circ C$			0.55	V
Reverse Current	$I_R$	$V_R=25V, T_J=25^\circ C$			50	$\mu A$
Interterminal Capacitance	C	$V_R=10V, f=1MHz$		17		pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=100mA, T_J=25^\circ C$ , See specified Test Circuit.			10	ns
Thermal Resistance	Rth(j-a)1			420		$^\circ C / W$
	Rth(j-a)2	Mounted in Cu-foiled area of 16mm <sup>2</sup> x0.2mm on glass epoxy board		330		$^\circ C / W$

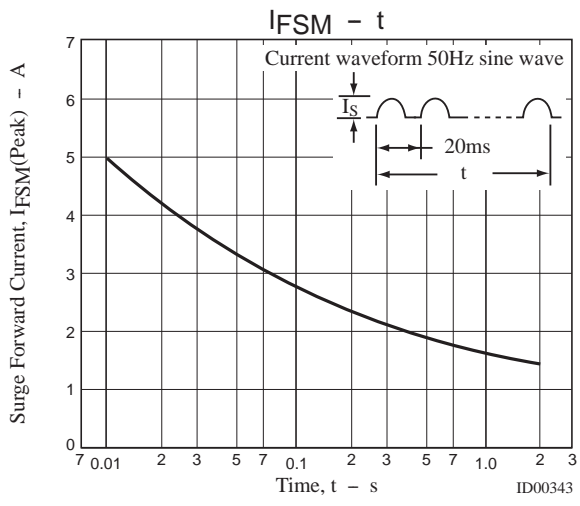
## t<sub>rr</sub> Test Circuit



## Ordering Information

Device	Package	Shipping	memo
SB05-05C-TB-E	CP	3,000pcs./reel	Pb Free





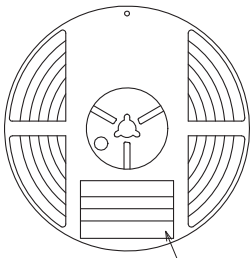
Embossed Taping Specification

SB05-05C-TB-E

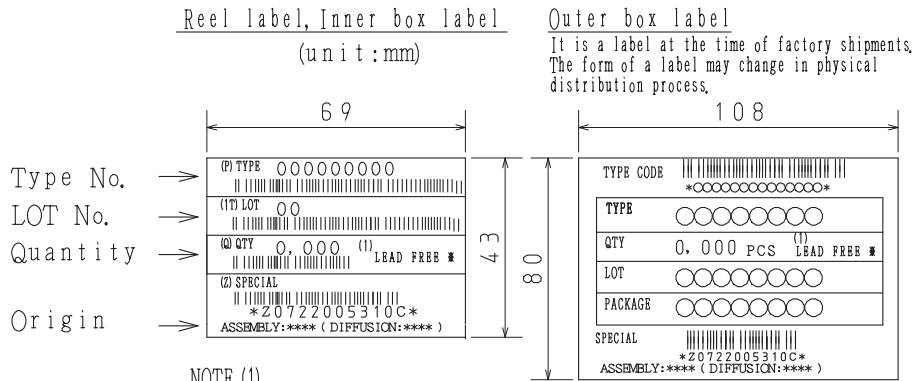
1. Packing Format

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)
CP	CP	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

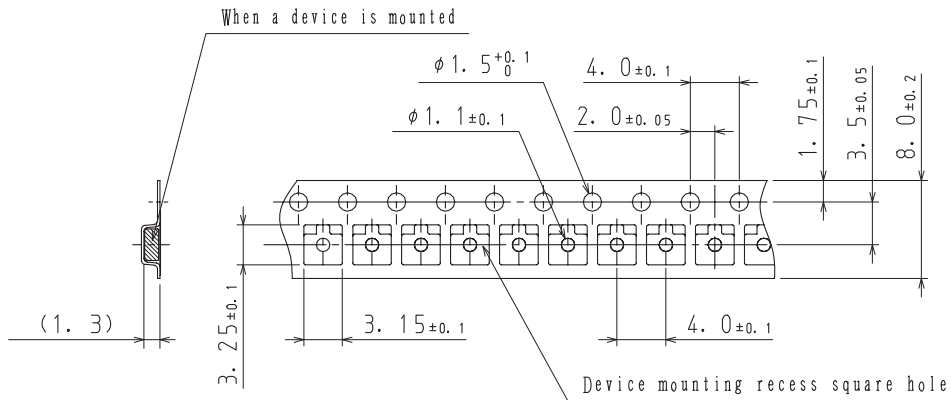


Reel label

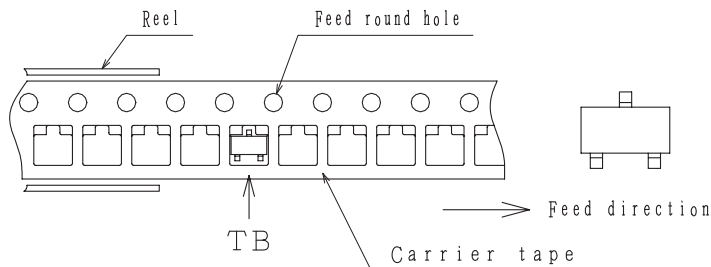


2. Taping configuration

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



2-2. Device placement direction

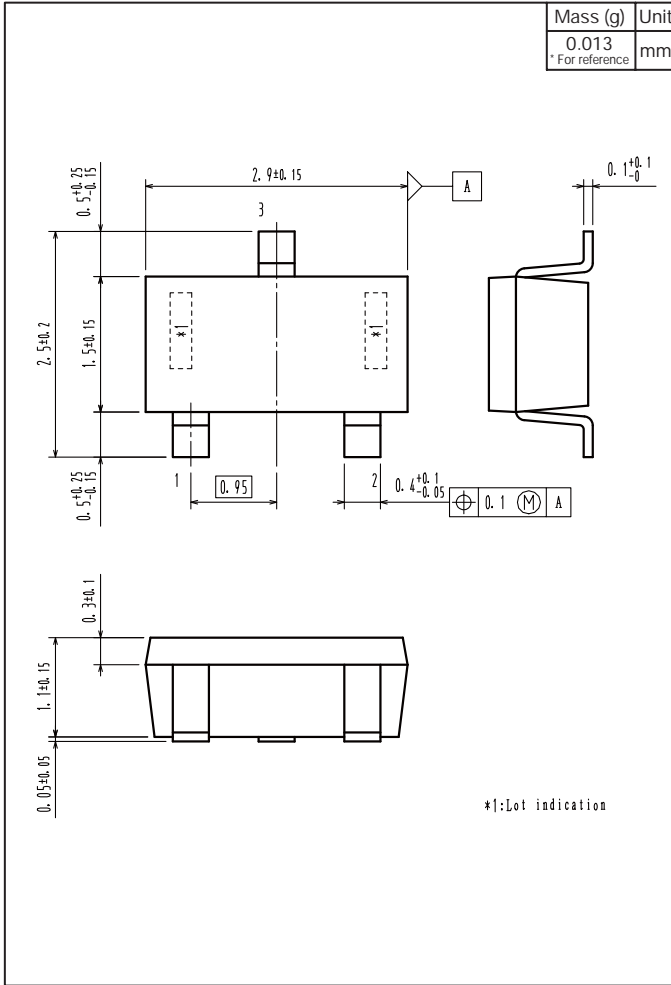


Those with one electrode terminal on the feed hole side.....TB

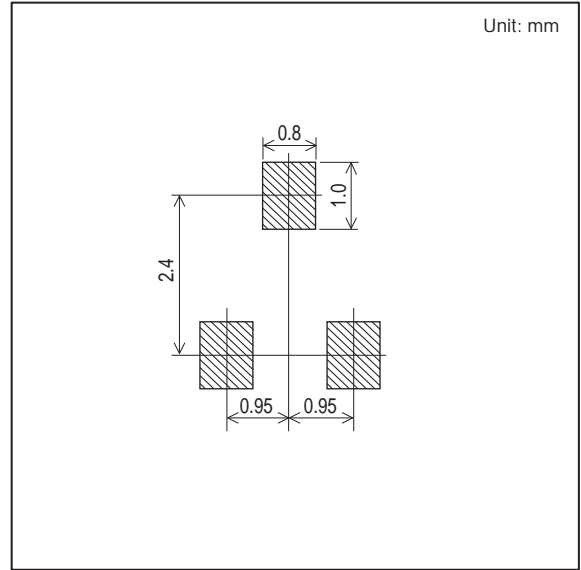
# SB05-05C

## Outline Drawing

SB05-05C-TB-E



## Land Pattern Example



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