



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

SB02-09C — Schottky Barrier Diode

90V, 200mA Rectifier

Applications

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

Features

- Low forward voltage (V_F max=0.7V)
- Low switching noise
- Low leakage current and high reliability due to highly reliable planar structure
- Fast reverse recovery time (t_{rr} max=10ns)

Specifications

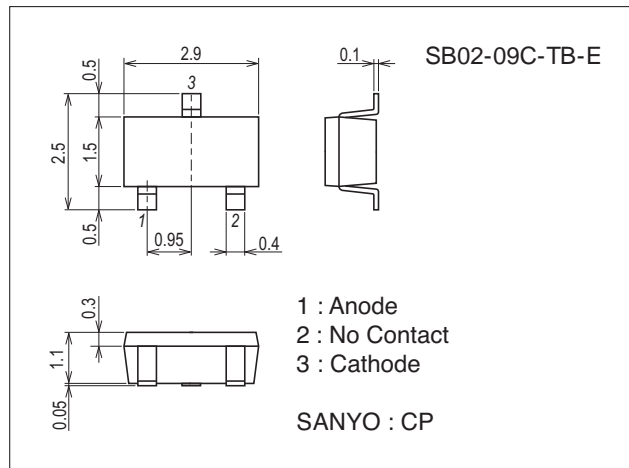
Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	V_{RRM}		90	V
Nonrepetitive Peak Reverse Surge Voltage	V_{RSM}		95	V
Average Output Current	I_O		200	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)

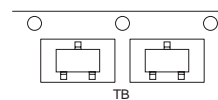
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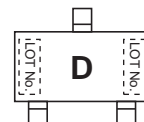
Product & Package Information

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

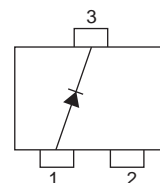
Packing Type: TB



Marking



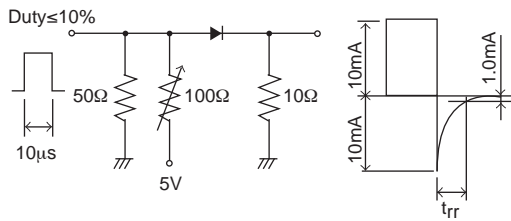
Electrical Connection



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

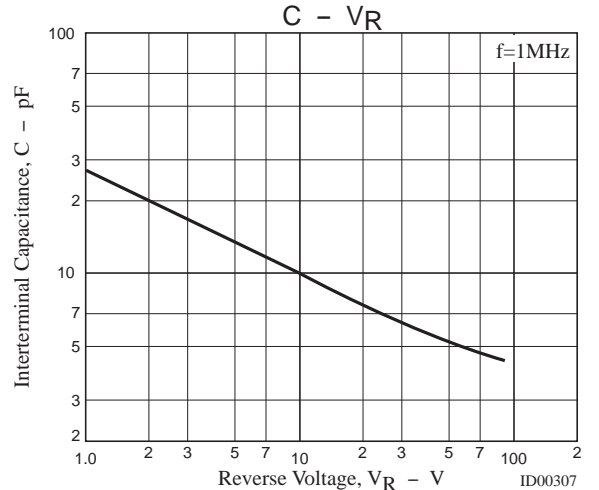
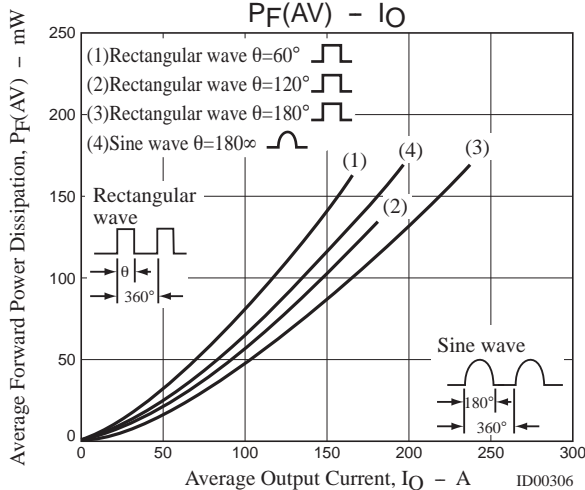
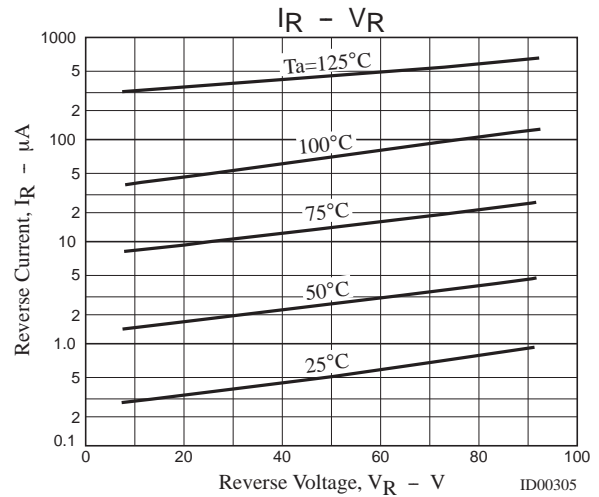
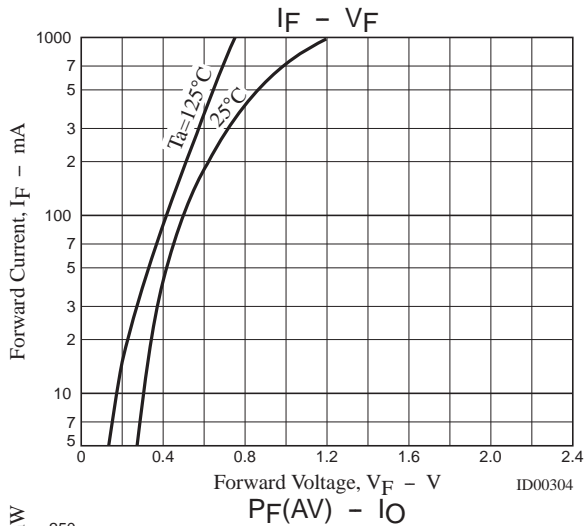
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V_R	$I_R=200\mu\text{A}$	90			V
Forward Voltage	V_F	$I_F=200\text{mA}$			0.7	V
Reverse Current	I_R	$V_R=45\text{V}$			50	μA
Interterminal Capacitance	C	$V_R=10\text{V}$, $f=1\text{MHz}$		10		pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=100\text{mA}$, See specified Test Circuit.			10	ns
Thermal Resistance	$R_{th(j-a)1}$			420		$^{\circ}\text{C} / \text{W}$
	$R_{th(j-a)2}$	Mounted in Cu-foiled area of $16\text{mm}^2 \times 0.2\text{mm}$ on glass epoxy board		330		$^{\circ}\text{C} / \text{W}$

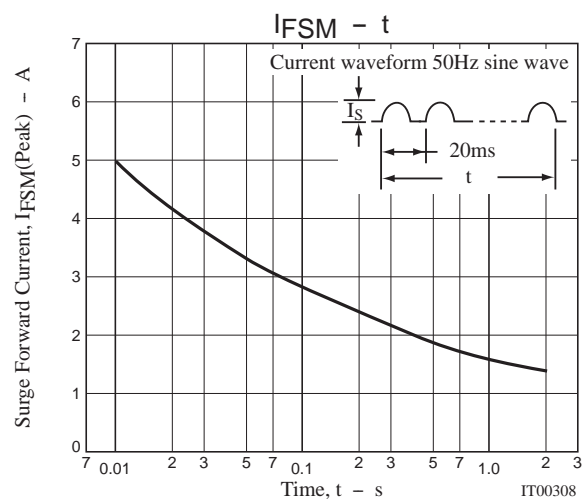
t_{rr} Test Circuit



Ordering Information

Device	Package	Shipping	memo
SB02-09C-TB-E	CP	3,000pcs./reel	Pb Free





Embossed Taping Specification

SB02-09C-TB-E

1. Packing Format

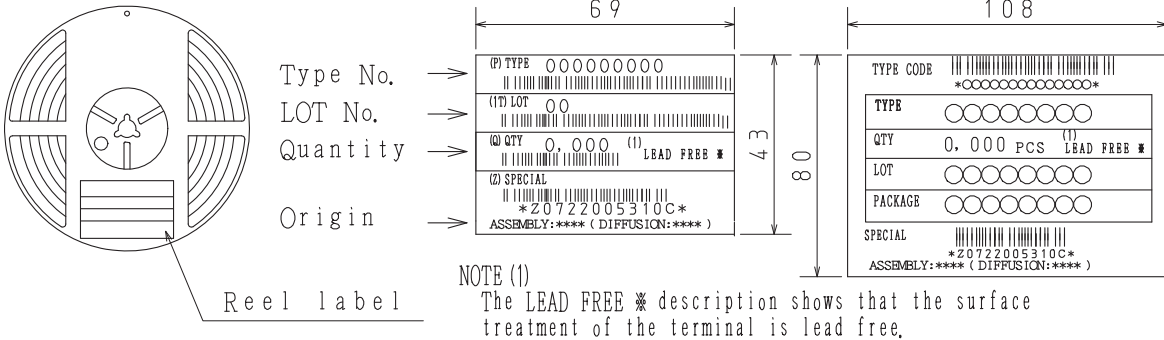
Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
CP	CP	3,000	15,000	90,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

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.

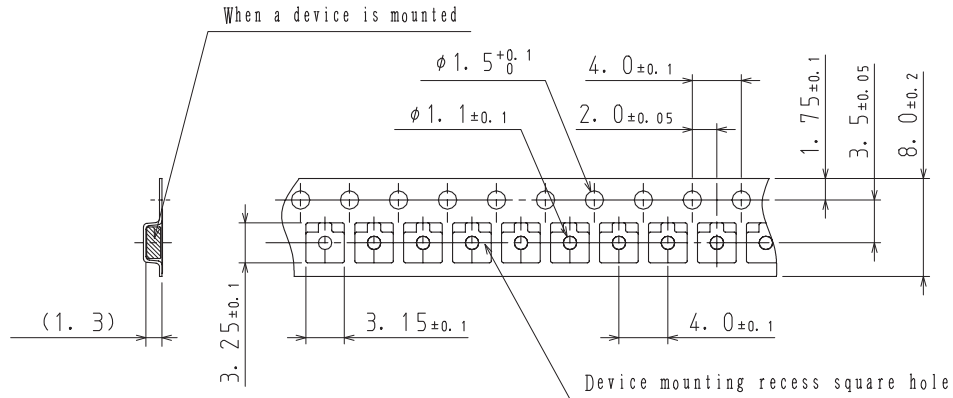
Packing method



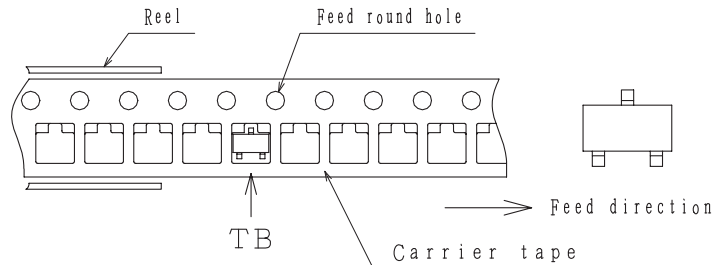
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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

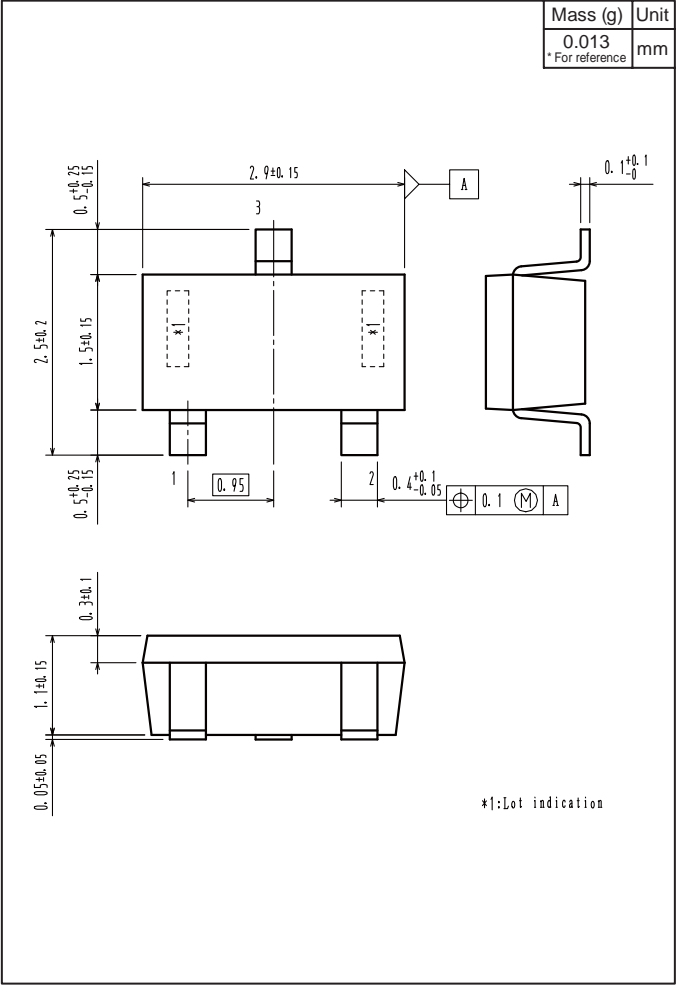


2-2. Device placement direction

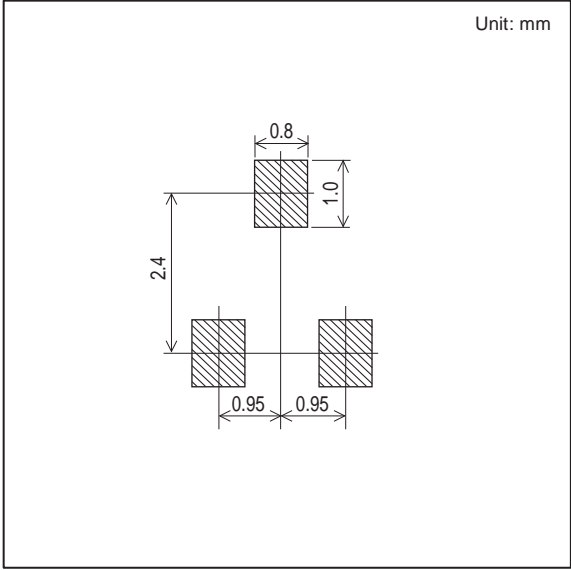


Those with one electrode terminal on the feed hole side.....TB

Outline Drawing
SB02-09C-TB-E



Land Pattern Example



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