Ordering number : ENA0409A

SB05-05C

Schottky Barrier Diode
50V, 0.5A, Low I_R, Single CP

ON Semiconductor®
http://onsemi.com

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

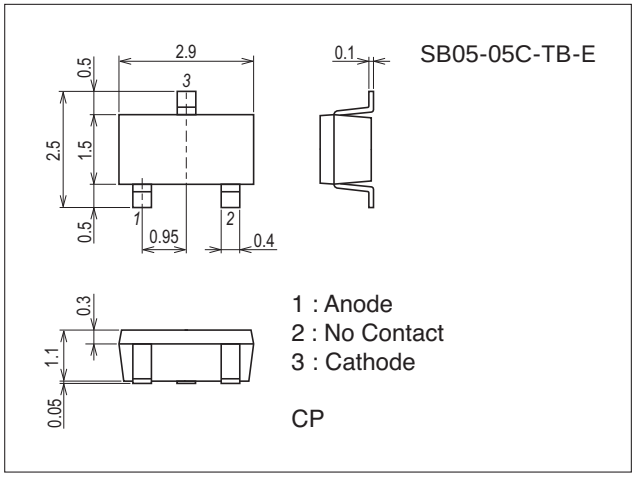
Features
- Low forward voltage (V_F max=0.55V)
- Fast reverse recovery time (t_{rr} max=10ns)
- Low switching noise
- Low leakage current and high reliability due to highly reliable planar structure

Specifications
Absolute Maximum Ratings at Ta=25°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	Tj		−55 to +125	°C
Storage Temperature	Tstg		−55 to +125	°C

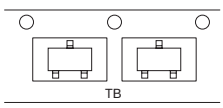
Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

Package Dimensions
unit : mm (typ)
7013A-004

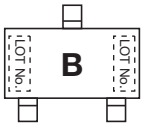


Product & Package Information
- Package : CP
- JEITA, JEDEC : SC-59, TO-236, SOT-23, TO-236AB
- Minimum Packing Quantity : 3,000 pcs./reel

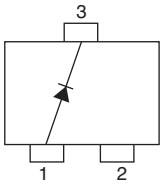
Packing Type: TB



Marking



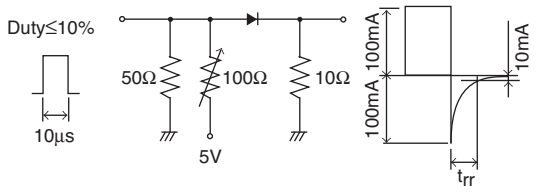
Electrical Connection



Electrical Characteristics at Ta=25°C

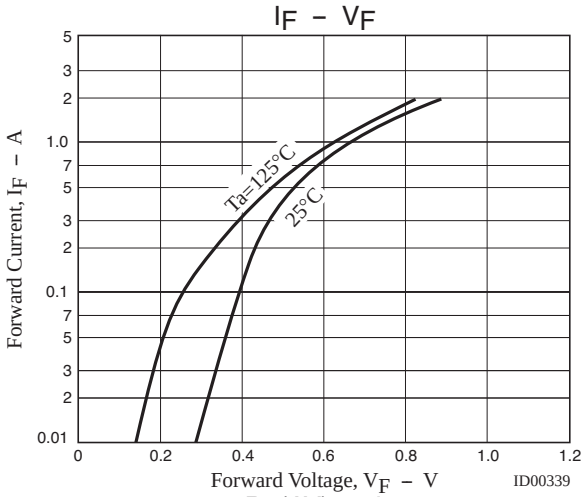
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V_R	I_R=200μA, Tj=25°C	50			V
Forward Voltage	V_F	I_F=500mA, Tj=25°C			0.55	V
Reverse Current	I_R	V_R=25V, Tj=25°C			50	μA
Interterminal Capacitance	C	V_R=10V, f=1MHz		17		pF
Reverse Recovery Time	t_{rr}	I_F=I_R=100mA, Tj=25°C, See specified Test Circuit.			10	ns
Thermal Resistance	Rth(j-a)1			420		°C / W
	Rth(j-a)2	Mounted in Cu-foiled area of 16mm²×0.2mm on glass epoxy board		330		°C / W

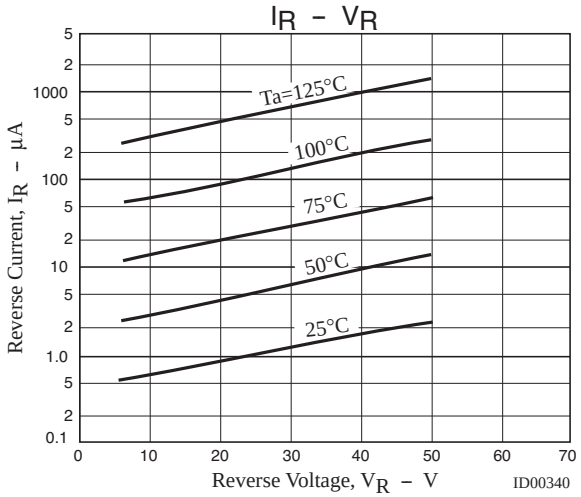
t_{rr} Test Circuit

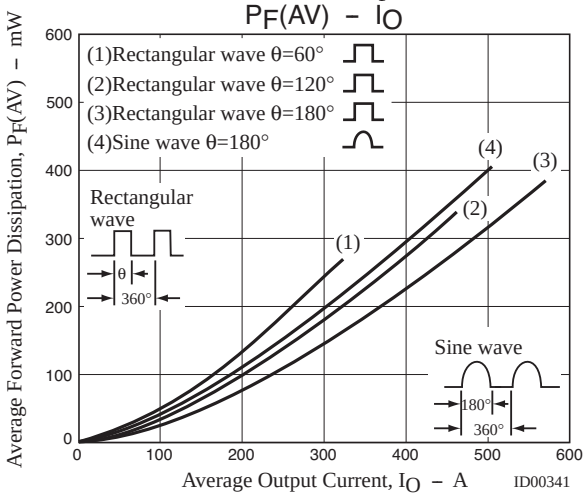


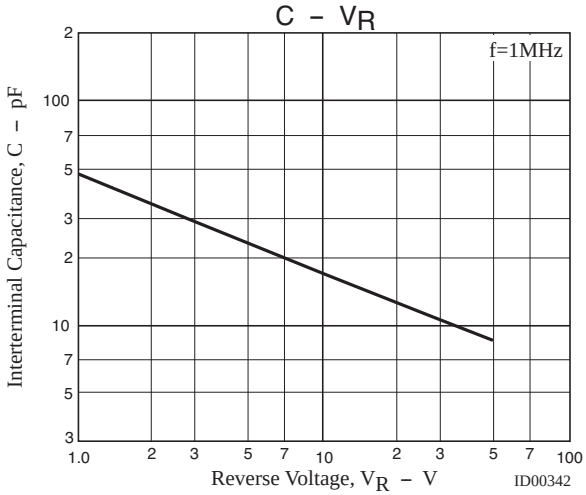
Ordering Information

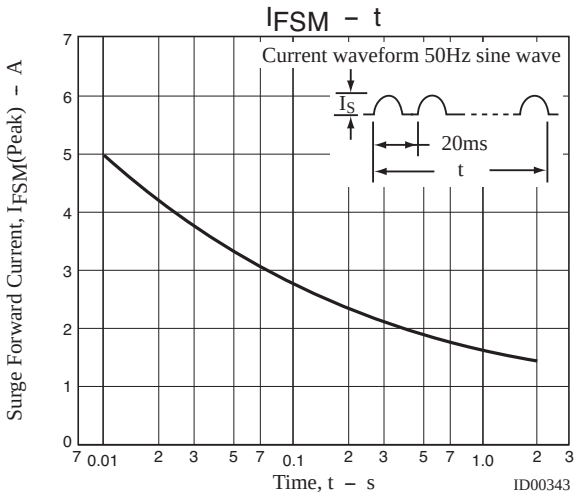
Device	Package	Shipping	memo
SB05-05C-TB-E	CP	3,000pcs./reel	Pb Free










IFSM – t
Current waveform 50Hz sine wave
IS
20ms
t
Surge Forward Current, IFSM(Peak) – A
0
1
2
3
4
5
6
7
0.01
0.1
1.0
Time, t – s
ID00343

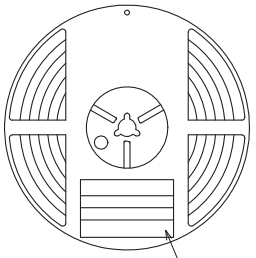
Embossed Taping Specification

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

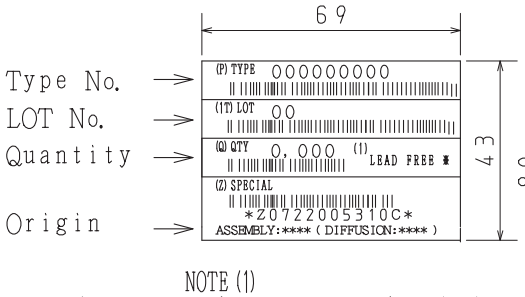
Packing method



Reel label

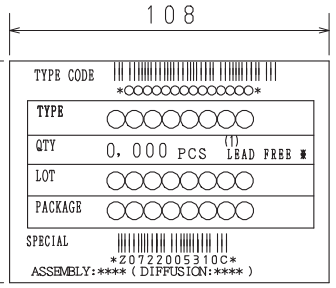
Reel label, Inner box label

(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.

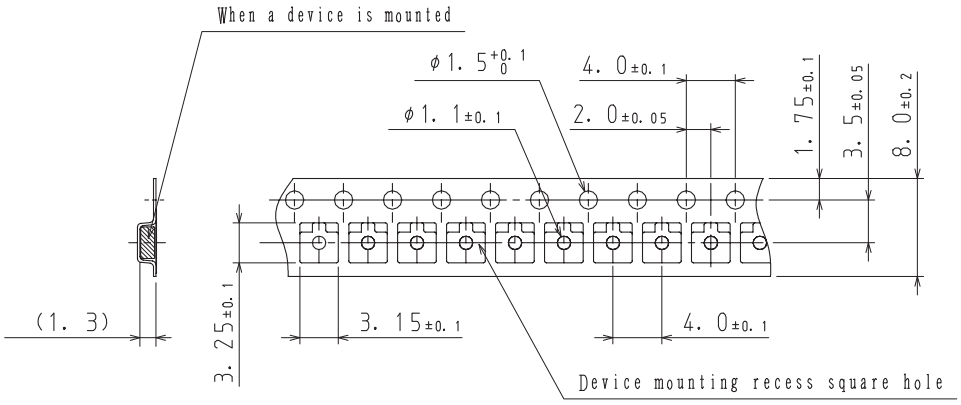


NOTE (1)
The LEAD FREE ※ description shows that the surface treatment of the terminal is lead free.

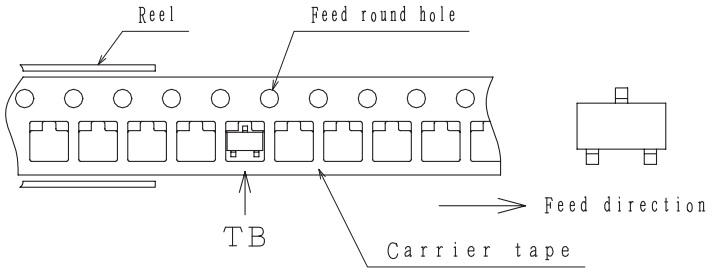
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



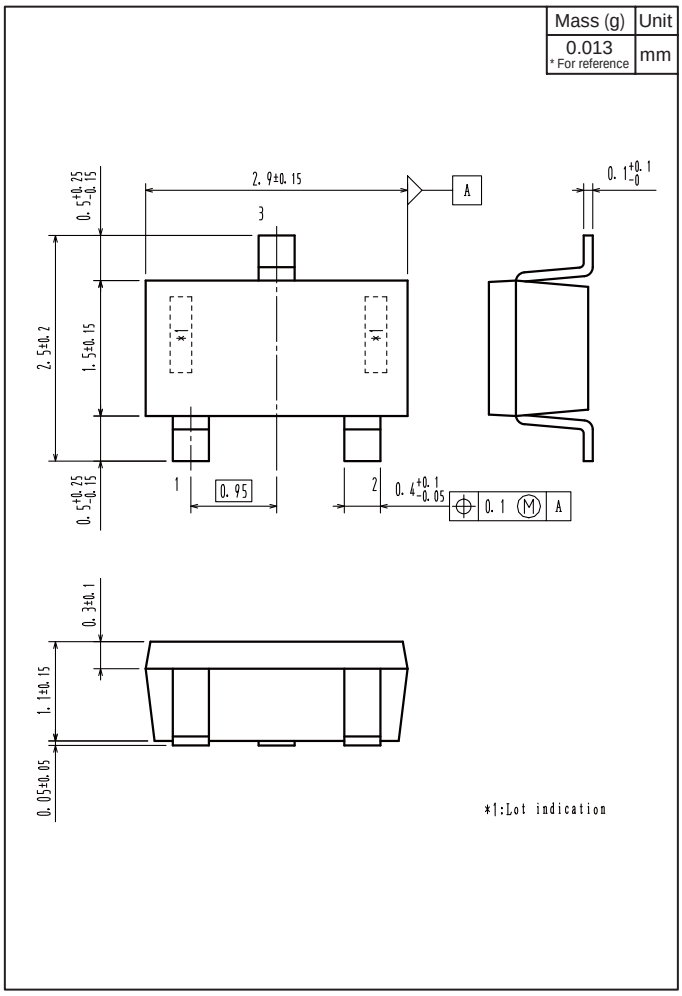
2-2. Device placement direction



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

Outline Drawing

SB05-05C-TB-E



Land Pattern Example