Ordering number : EN6343A

SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

SBE002 — Schottky Barrier Diode 50V, 1A Rectifier

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
- Ultrasmall package, permitting SBE002-applied sets to be compact and slim (mounting height 0.9mm)
- Large allowable power dissipation

Specifications

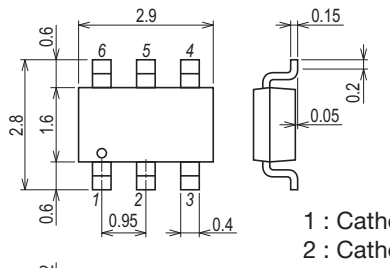
Absolute Maximum Ratings at Ta=25°C

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		1	A
Surge Forward Current	I_{FSM}	50Hz sine wave, 1 cycle	10	A
Junction Temperature	Tj		−55 to +125	°C
Storage Temperature	Tstg		−55 to +125	°C

Package Dimensions

unit : mm (typ)

7018A-012



SBE002-TL-E

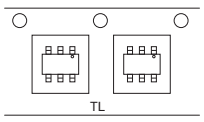
1 : Cathode
2 : Cathode
3 : No contact
4 : Anode
5 : Cathode
6 : Cathode

SANYO : CPH6

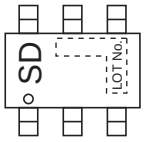
Product & Package Information

- Package : CPH6
- JEITA, JEDEC : SC-74, SOT-26, SOT-457
- Minimum Packing Quantity : 3,000 pcs./reel

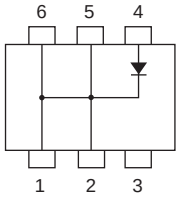
Packing Type: TL



Marking



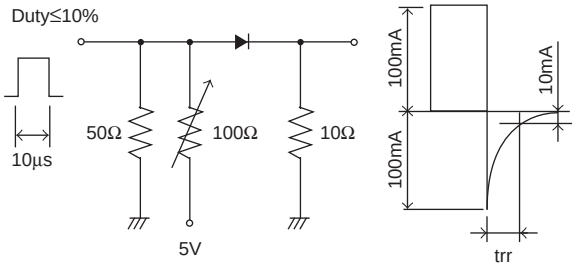
Electrical Connection



Electrical Characteristics at Ta=25°C

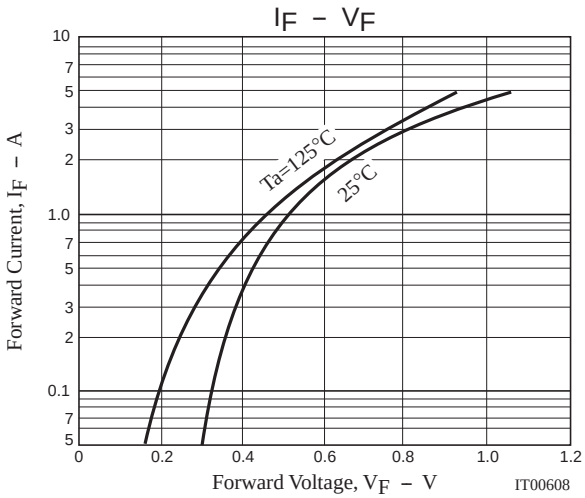
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V_R	I_R=300μA	50			V
Forward Voltage	V_F	I_F=1A			0.55	V
Reverse Current	I_R	V_R=25V			80	μA
Interterminal Capacitance	C	V_R=10V, f=1MHz		52		pF
Reverse Recovery Time	t_{rr}	I_F=I_R=100mA, See specified Test Circuit.			10	ns
Thermal Resistance	Rth(j-a)	When mounted on ceramic substrate (600mm^2×0.8mm)		110		°C / W

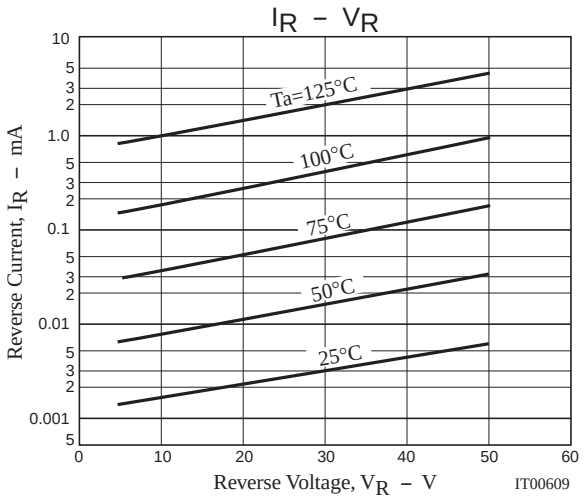
t_{rr} Test Cicuit

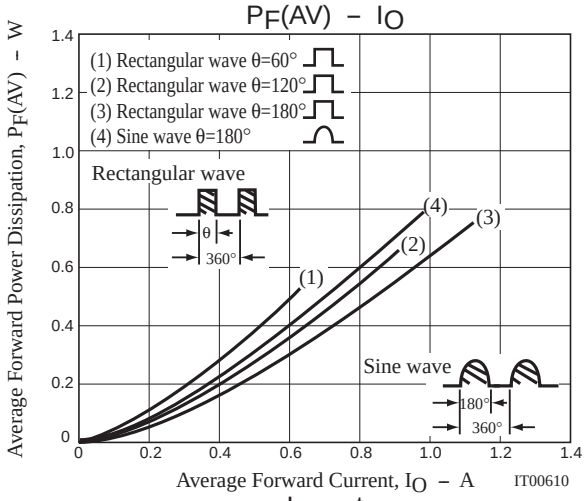


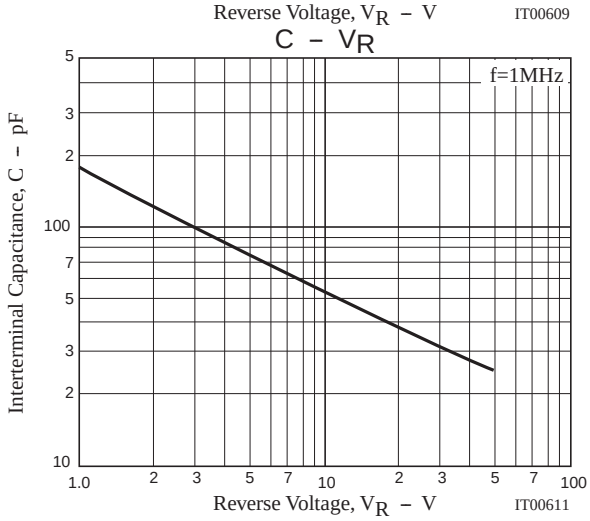
Ordering Information

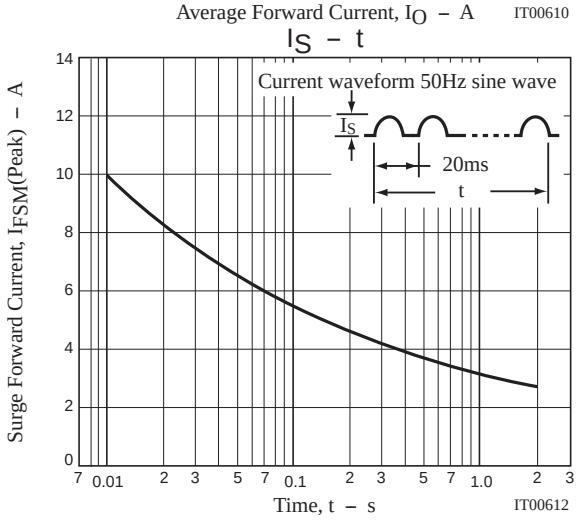
Device	Package	Shipping	memo
SBE002-TL-E	CPH6	3,000pcs./reel	Pb Free


IF – VF
Forward Current, IF – A
Forward Voltage, VF – V
Ta=125°C
25°C
IT00608


IR – VR
Reverse Current, IR – mA
Reverse Voltage, VR – V
Ta=125°C
100°C
75°C
50°C
25°C
IT00609


PF(AV) – IO
Average Forward Power Dissipation, PF(AV) – W
Average Forward Current, IO – A
(1) Rectangular wave θ=60°
(2) Rectangular wave θ=120°
(3) Rectangular wave θ=180°
(4) Sine wave θ=180°
Rectangular wave
θ
360°
Sine wave
180°
360°
IT00610


C – VR
Interterminal Capacitance, C – pF
Reverse Voltage, VR – V
f=1MHz
IT00611


IS – t
Surge Forward Current, IFSM(Peak) – A
Time, t – s
Current waveform 50Hz sine wave
IS
20ms
t
IT00612

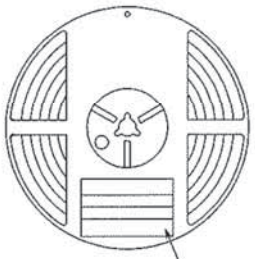
Embossed Taping Specification

SBE002-TL-E

1. Packing Format

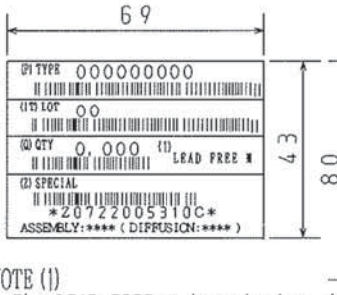
Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
CPH6	CPH6	3,000	15,000	90,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

Packing method



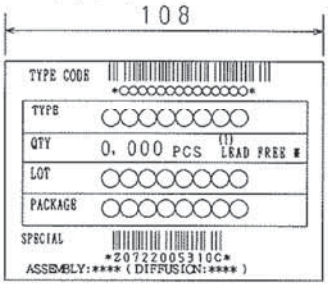
Reel label

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.

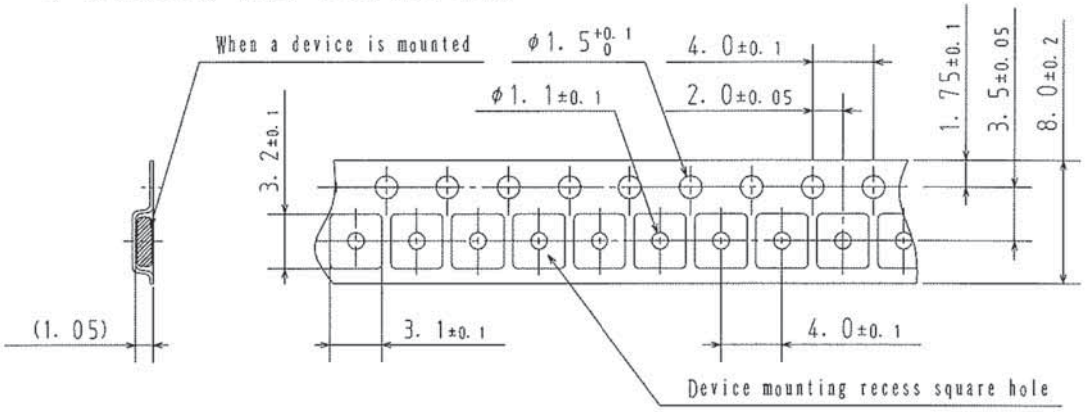


NOTE (1)
The LEAD FREE ※ description shows that the surface treatment of the terminal is lead free.

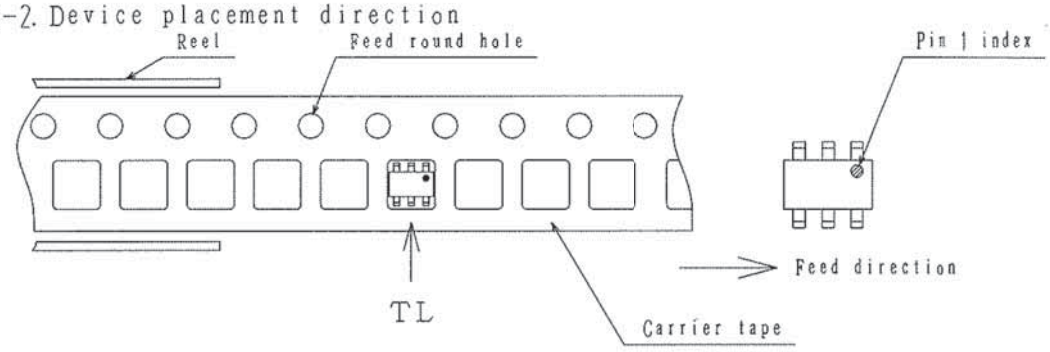
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



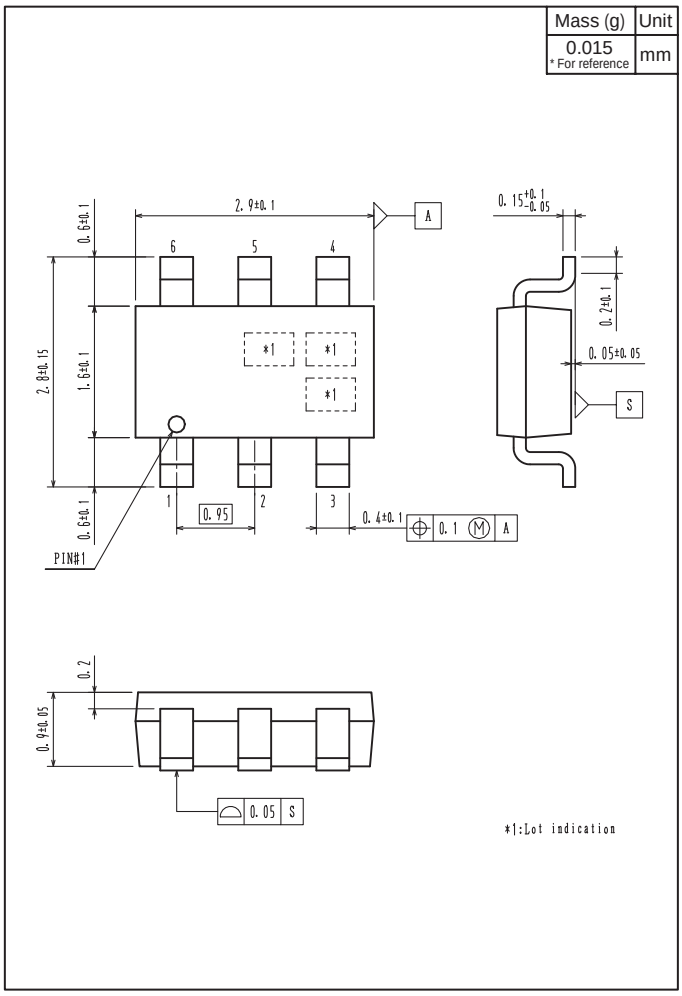
2-2. Device placement direction



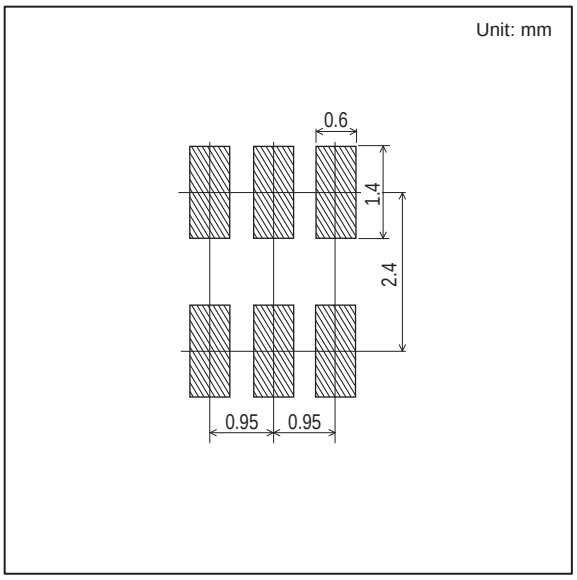
Those with pin 1 index on the feed hole side·····TL

Outline Drawing

SBE002-TL-E



Land Pattern Example



This catalog provides information as of September, 2012. Specifications and information herein are subject to change without notice.