



SANYO Semiconductors

# DATA SHEET

An ON Semiconductor Company

## SBE813 — Low IR Schottky Barrier Diode 30V, 3.0A Rectifier

### Applications

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

### Features

- Small switching noise
- Low leakage current and high reliability due to highly reliable planar structure
- Ultrasmall package permitting applied sets to be small and slim

### Specifications

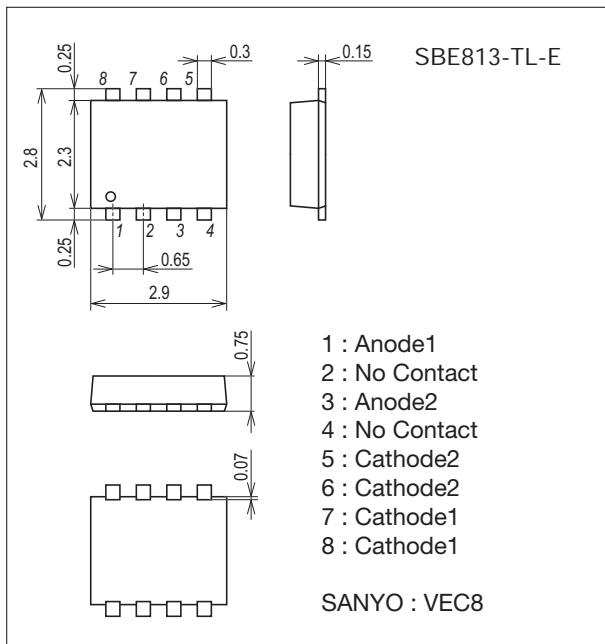
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	VRRM		30	V
Nonrepetitive Peak Reverse Surge Voltage	VRSM		35	V
Average Output Current	IO		3.0	A
Surge Forward Current	IFSM	50Hz sine wave, 1 cycle	20	A
Junction Temperature	Tj		-55 to +125	°C
Storage Temperature	Tstg		-55 to +125	°C

### Package Dimensions

unit : mm (typ)

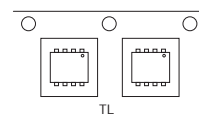
7012-001



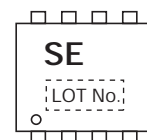
### Product & Package Information

- Package : VEC8
- JEITA, JEDEC : -
- Minimum Packing Quantity : 3,000 pcs./reel

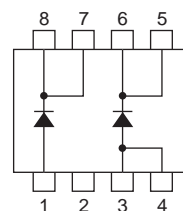
### Packing Type : TL



### Marking



### Electrical Connection

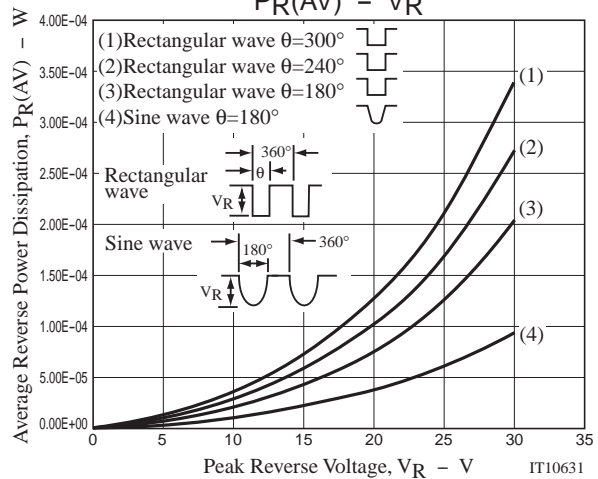
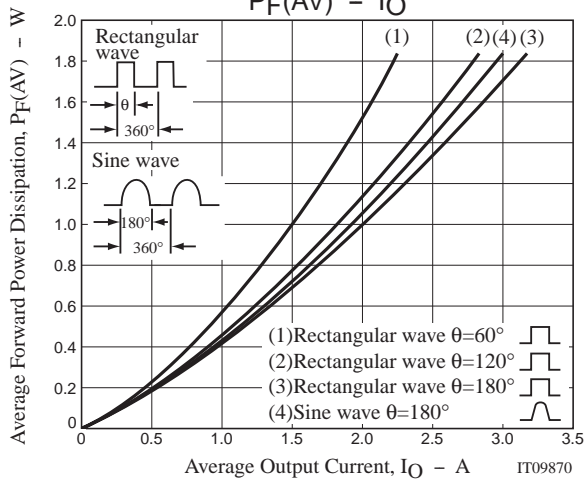
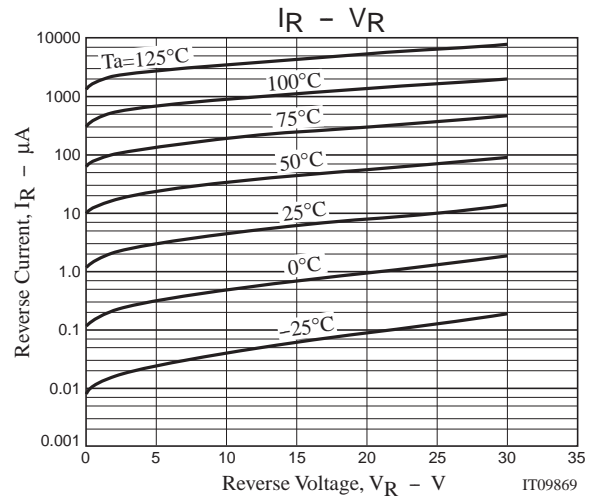
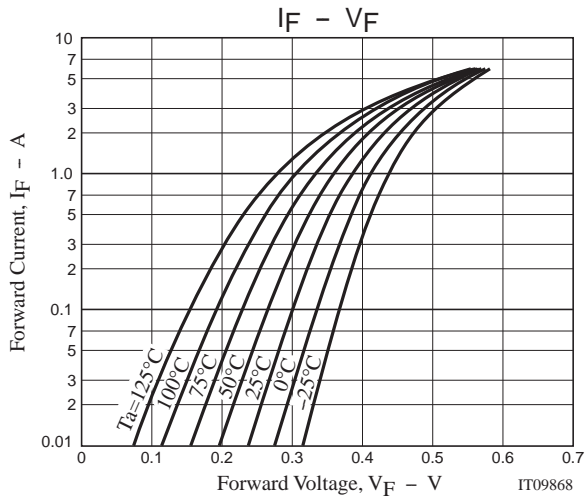


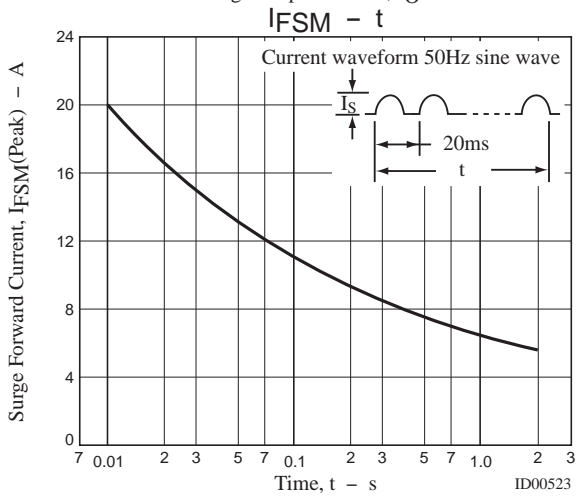
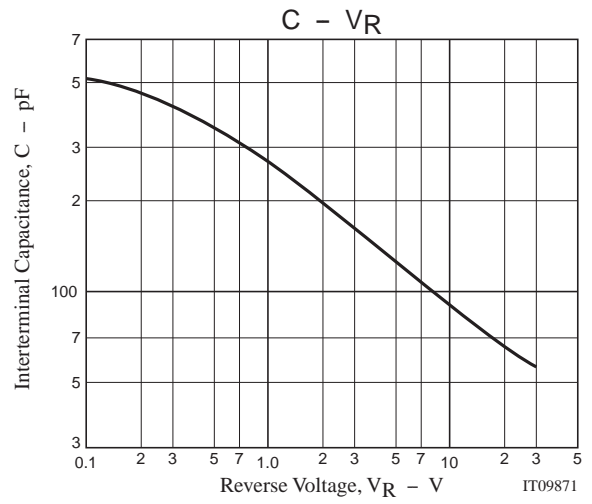
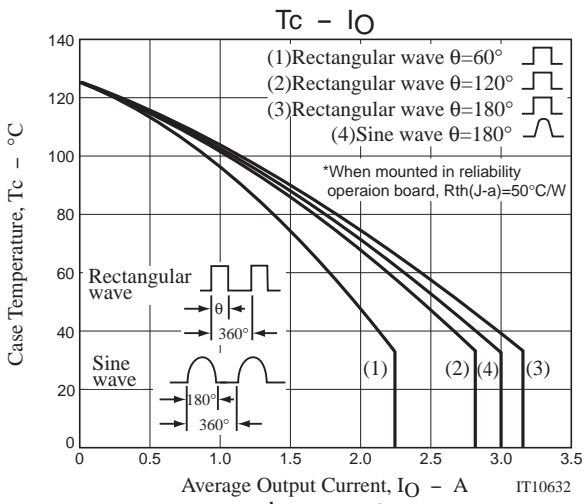
Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V <sub>R</sub>	I <sub>R</sub> =0.5mA	30			V
Forward Voltage	V <sub>F1</sub>	I <sub>F</sub> =2.0A		0.435	0.485	V
	V <sub>F2</sub>	I <sub>F</sub> =3.0A		0.47	0.52	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =15V			42	μA
Interterminal Capacitance	C	V <sub>R</sub> =10V, f=1MHz		90		pF
Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> =I <sub>R</sub> =100mA, See specified Test Circuit.			20	ns
Thermal Resistance	R <sub>th(j-a)</sub>	When mounted on ceramic substrate (1200mm <sup>2</sup> ×0.8mm)		50		°C / W

Ordering Information

Device	Package	Shipping	memo
SBE813-TL-E	VEC8	3,000pcs./reel	Pb Free





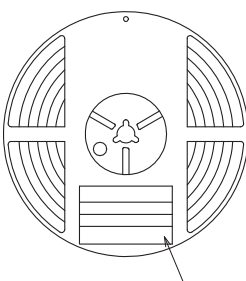
Taping Specification

SBE813-TL-E

1. Packing Format

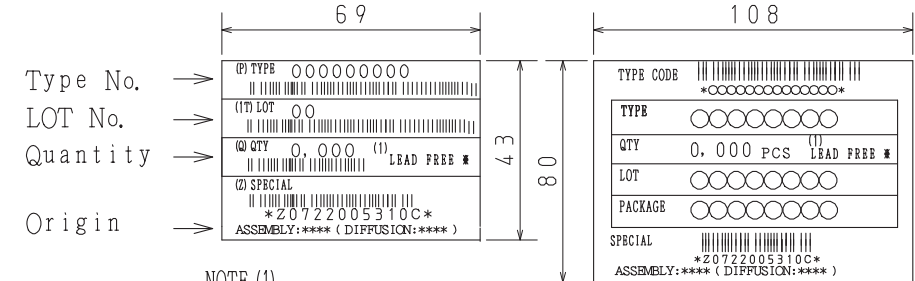
Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
VEC8	CPH6	3,000	15,000	90,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

Packing method



Reel label, 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.

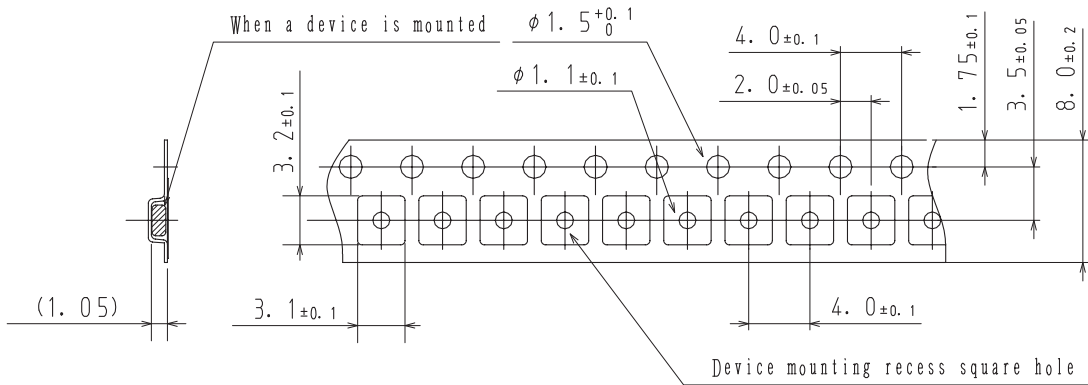


NOTE (1)  
The LEAD FREE \* description shows that the surface treatment of the terminal is lead free.

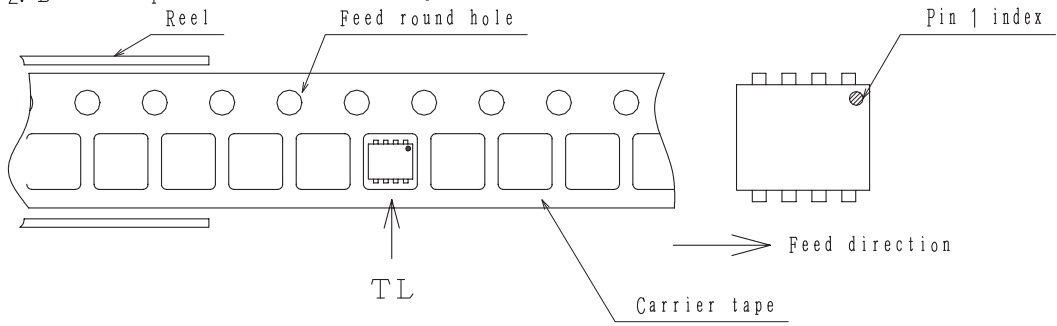
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



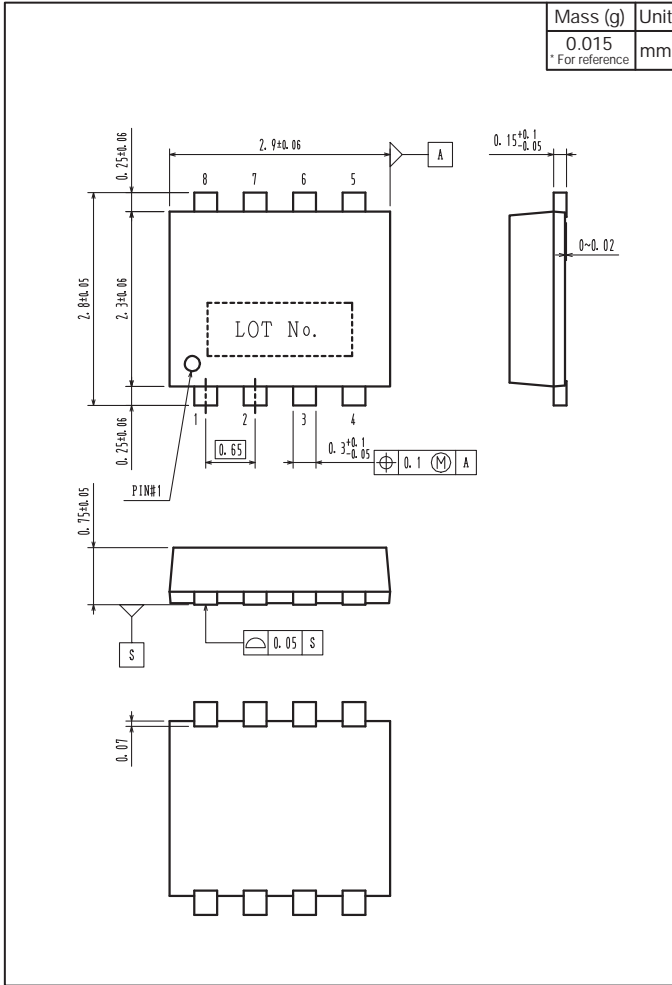
2-2. Device placement direction



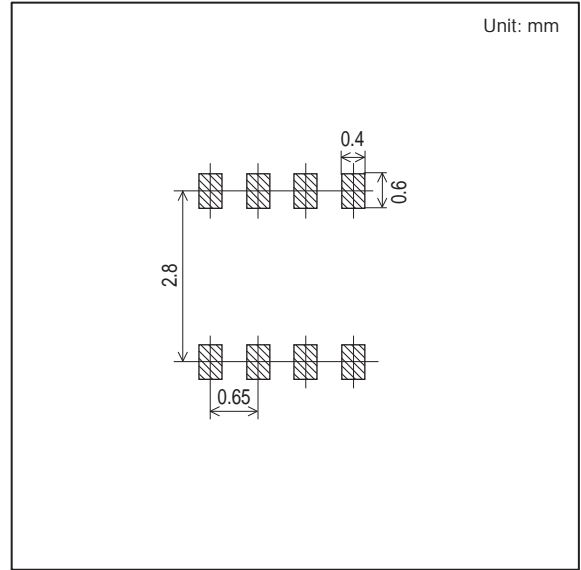
Those with oen electrode terminal on the feed hole side.....TL

# SBE813

## Outline Drawing SBE813-TL-E



## Land Pattern Example



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