



# SBE818 — Low IR Schottky Barrier Diode

## 30V, 2.0A Rectifier

### Applications

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

### Features

- Composite type device with 2 low IR SBD housed in one package, facilitating high density mounting
- Small switching noise
- Low forward voltage ( $I_F=2.0A$ ,  $V_F \text{ max}=0.62V$ )
- Low reverse current ( $V_R=15V$ ,  $I_R \text{ max}=7.5\mu A$ )
- Ultrasmall package permitting applied sets to be small and slim (Mounting height 0.75mm)

### Specifications

Absolute Maximum Ratings at  $T_a=25^\circ C$  (Value per element)

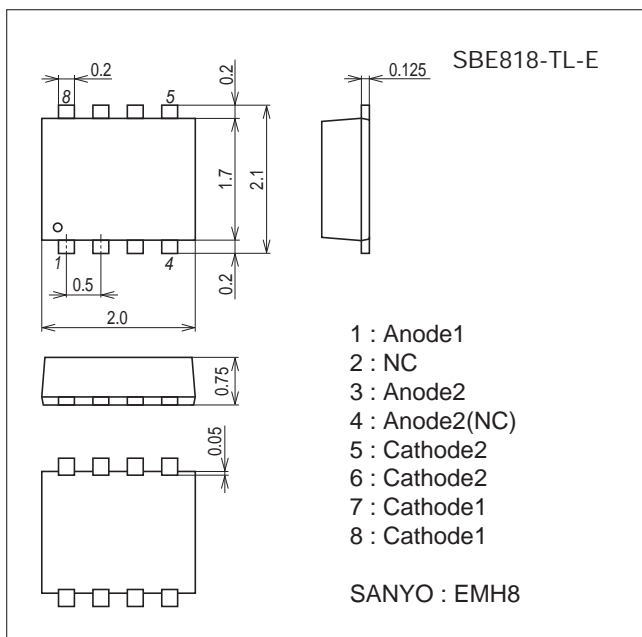
Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$		30	V
Nonrepetitive Peak Reverse Surge Voltage	$V_{RSM}$		30	V
Average Output Current	$I_O$	When mounted on ceramic substrate, Rectangular wave $180^\circ C$	2.0	A
		When mounted on glass epoxy substrate	1.5	A
Surge Forward Current	$I_{FSM}$	50Hz sine wave, 1 cycle	20	A
Junction Temperature	$T_j$		-55 to +125	$^\circ C$
Storage Temperature	$T_{stg}$		-55 to +125	$^\circ C$

\*: The absolute maximum ratings and electrical characteristics refer to those between Terminal 1 and Terminal 7 (or 8), and between Terminal 3 and Terminal 5 (or 6)

### Package Dimensions

unit : mm (typ)

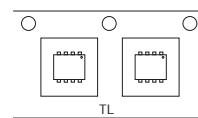
7045-004



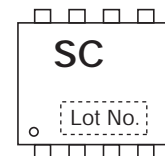
### Product & Package Information

- Package : EMH8
- JEITA, JEDEC : -
- Minimum Packing Quantity : 3,000 pcs./reel

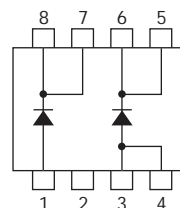
### Packing Type : TL



### Marking



### Electrical Connection



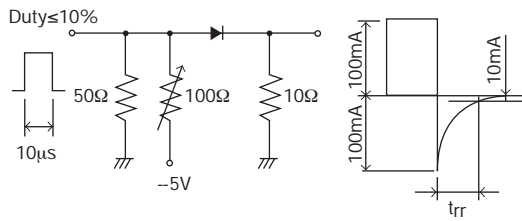
\*: Terminal 4 is used for the purposes such as test. Although it is connected to Anode 2, please handle it as NC Terminal.

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### Electrical Characteristics at Ta=25°C (Value per element)

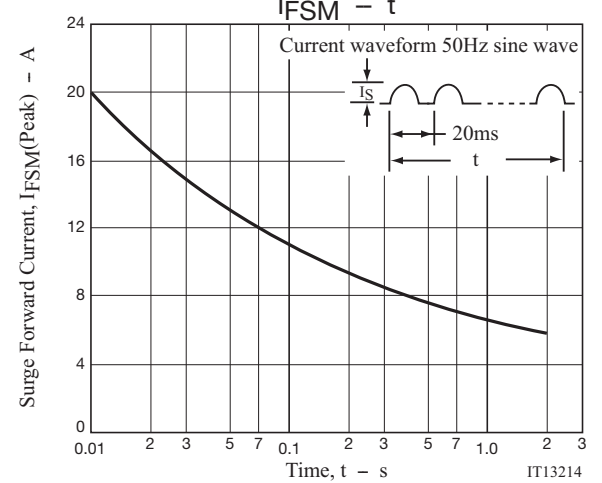
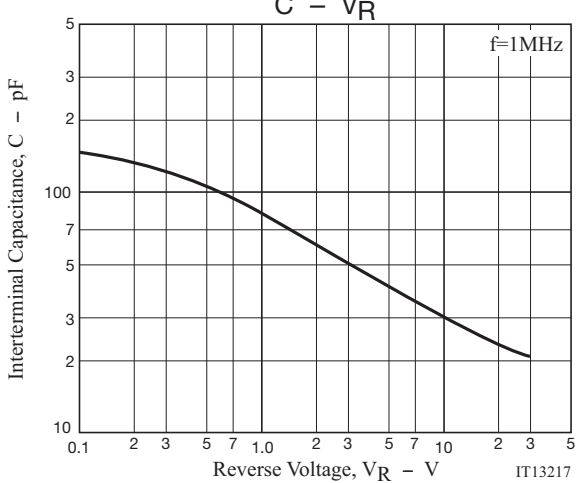
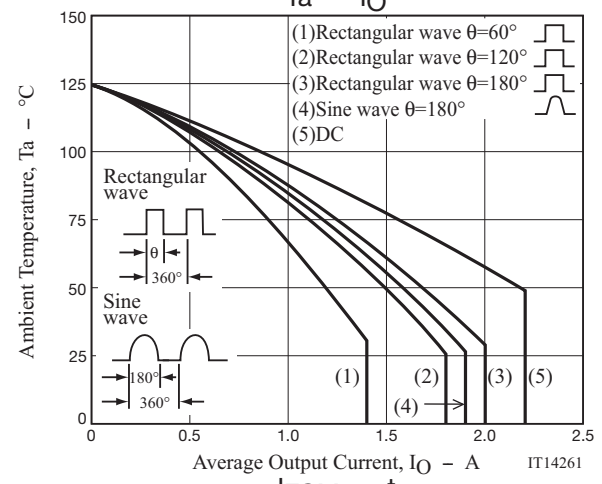
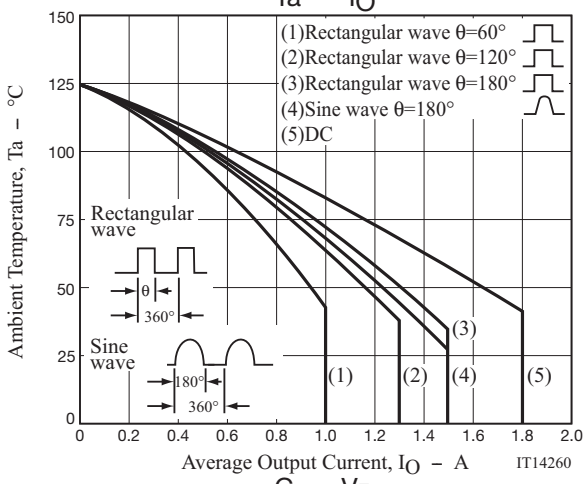
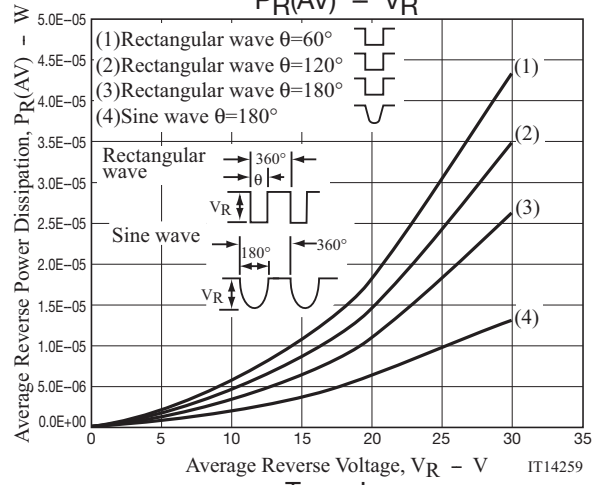
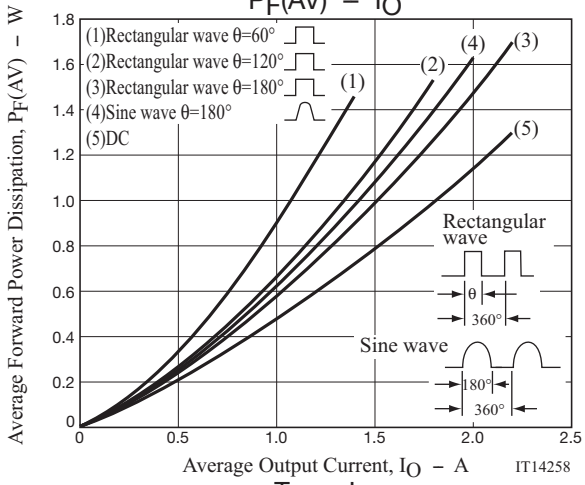
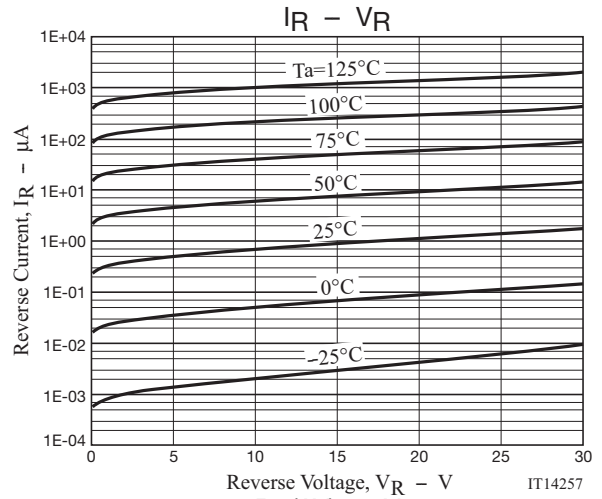
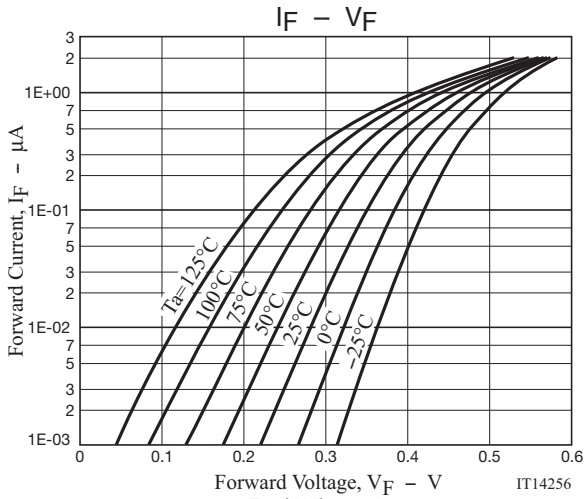
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V <sub>R</sub>	I <sub>R</sub> =1mA	30			V
Forward Voltage	V <sub>F1</sub>	I <sub>F</sub> =1.0A		0.48	0.53	V
	V <sub>F2</sub>	I <sub>F</sub> =1.5A		0.53	0.58	V
	V <sub>F3</sub>	I <sub>F</sub> =2.0A		0.57	0.62	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =15V			7.5	μA
Interterminal Capacitance	C	V <sub>R</sub> =10V, f=1MHz		30		pF
Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> =I <sub>R</sub> =100mA, See specified Test Circuit.			10	ns
Thermal Resistance	Rth(j-a)1	When mounted in Cu-foiled area of 0.96mm <sup>2</sup> ×0.03mm on glass epoxy substrate		100		°C / W
	Rth(j-a)2	When mounted on ceramic substrate (900mm <sup>2</sup> ×0.8mm)		65		°C / W

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



### Ordering Information

Device	Package	Shipping	memo
SBE818-TL-E	EMH8	3,000pcs./reel	Pb Free



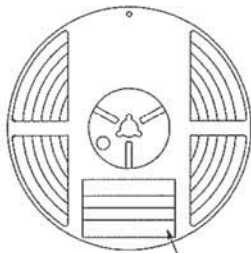
Embossed Taping Specification

SBE818-TL-E

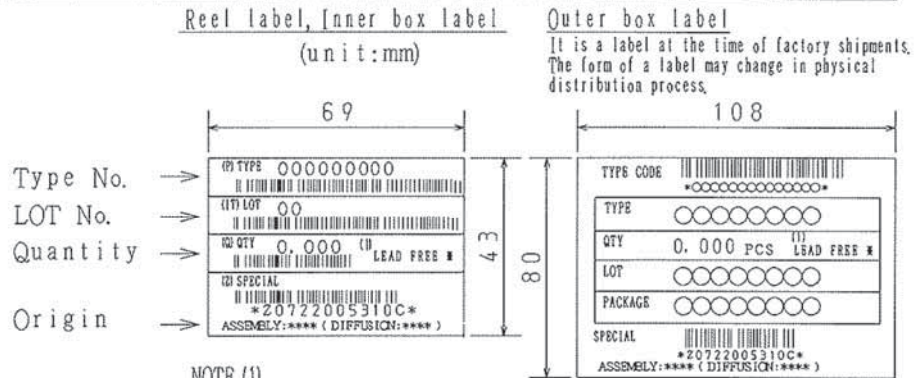
1. Packing Format

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)
EMH8	MCP4	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



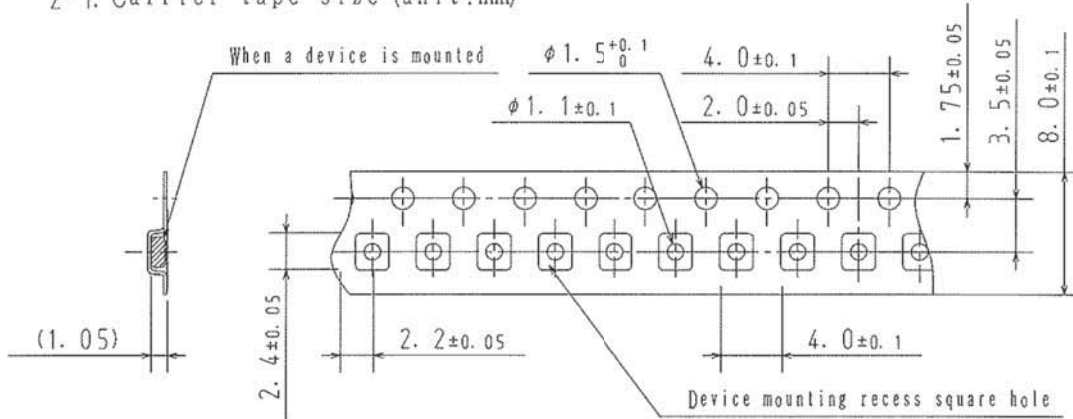
NOTE (1)

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

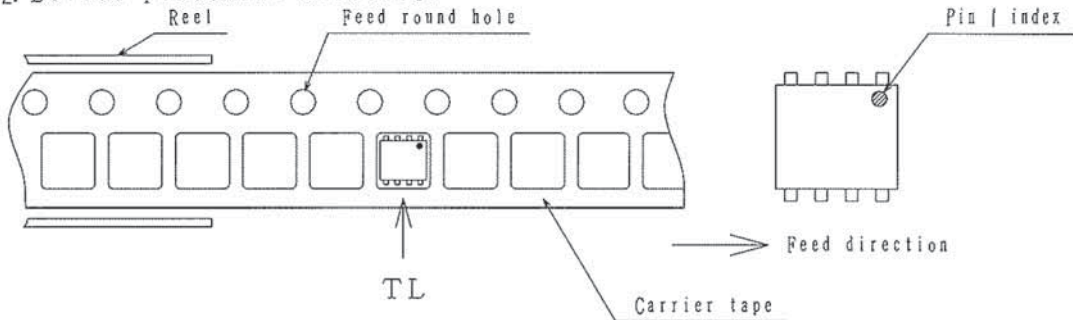
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



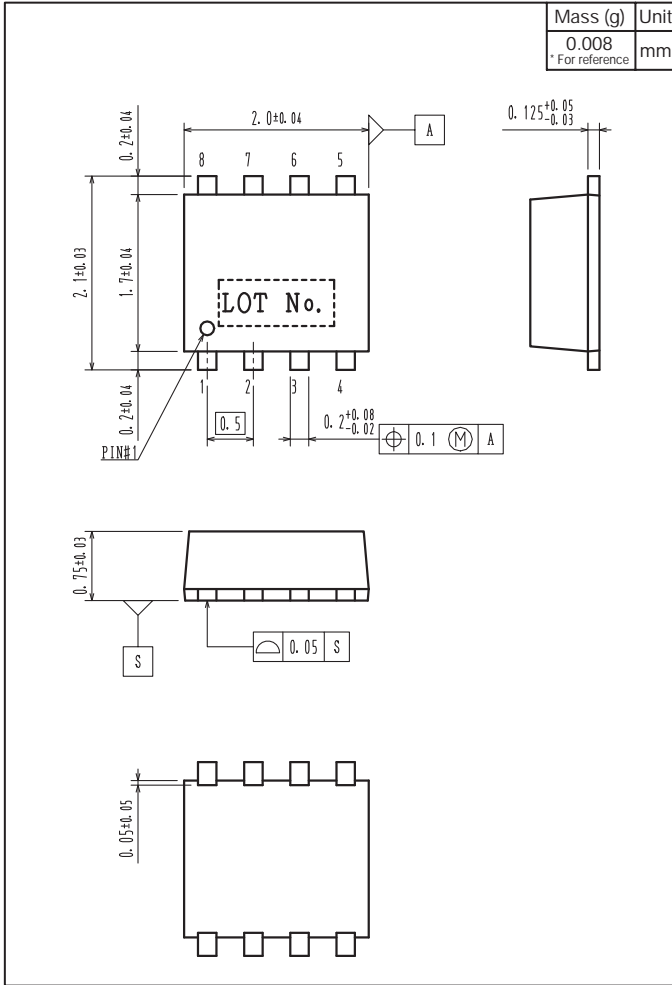
2-2. Device placement direction



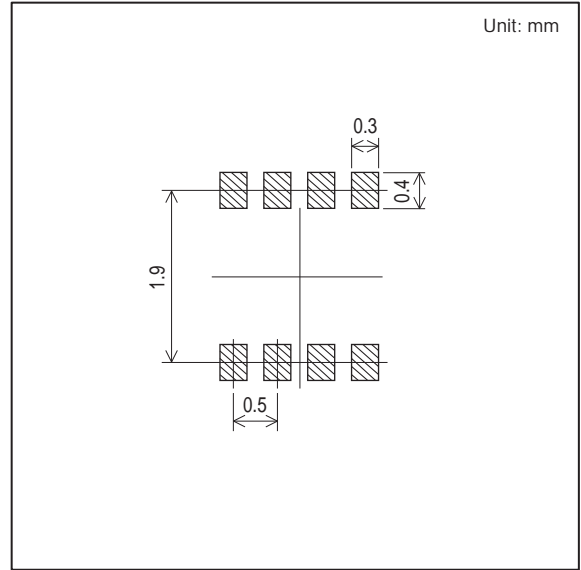
Those with pin | index on the feed hole side.....TL

# SBE818

## Outline Drawing SBE818-TL-E



## Land Pattern Example



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