



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

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)

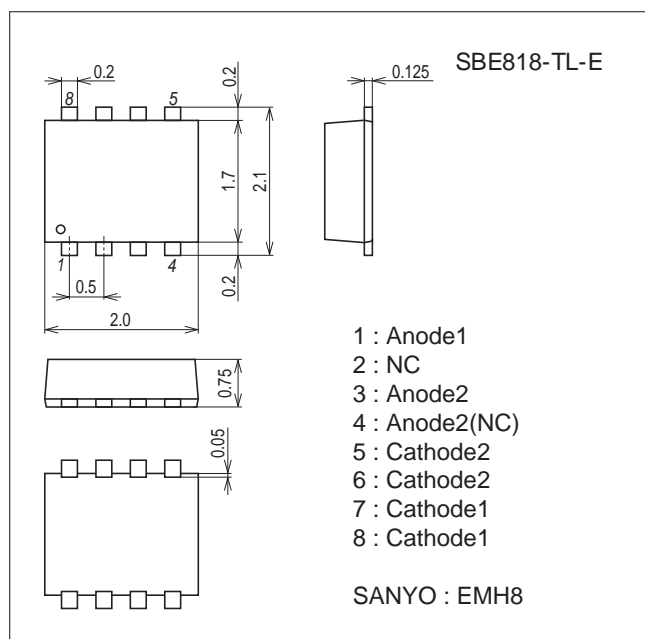
Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	V_{RRM}		30	V
Nonrepetitive Peak Reverse Surge Voltage	V_{RSM}		30	V
Average Output Current	I_O	When mounted on ceramic substrate, Rectangular wave $180^\circ C$	2.0	A
		When mounted on glass epoxy substrate	1.5	A
Surge Forward 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)

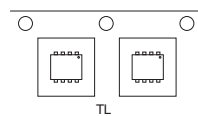
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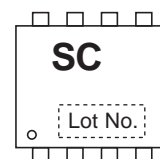
Product & Package Information

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

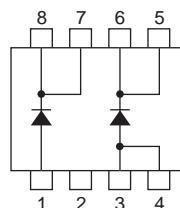
Packing Type : TL



Marking



Electrical Connection



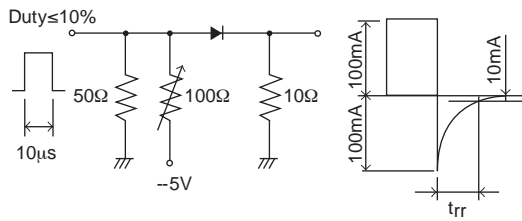
*: Terminal 4 is used for the purposes such as test. Although it is connected to Anode 2, please handle it as NC Terminal.

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

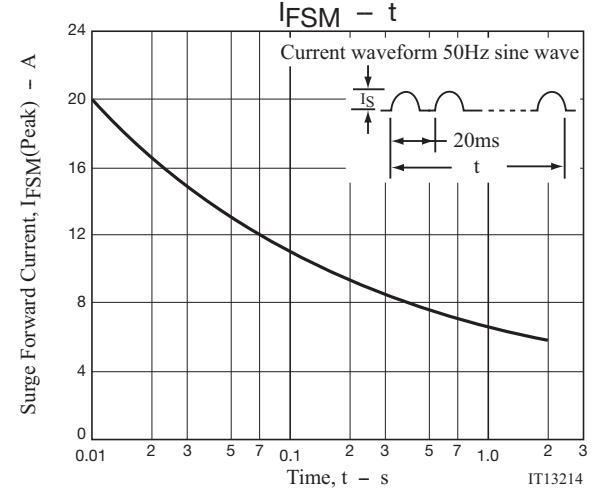
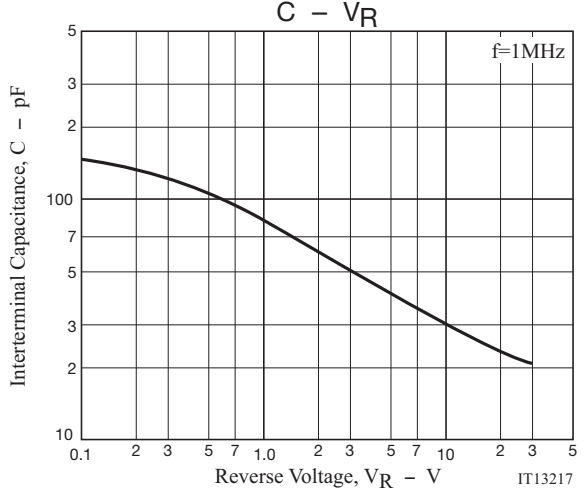
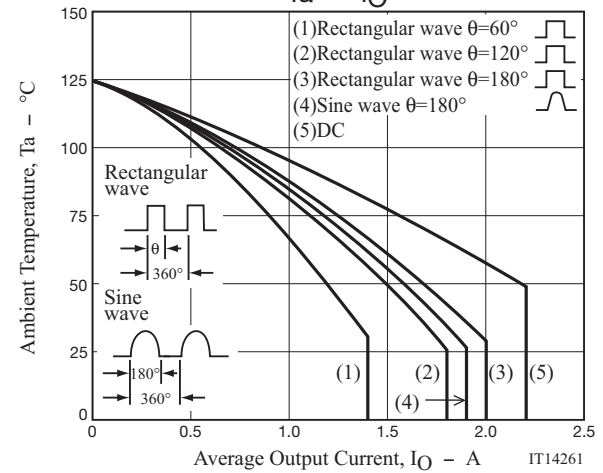
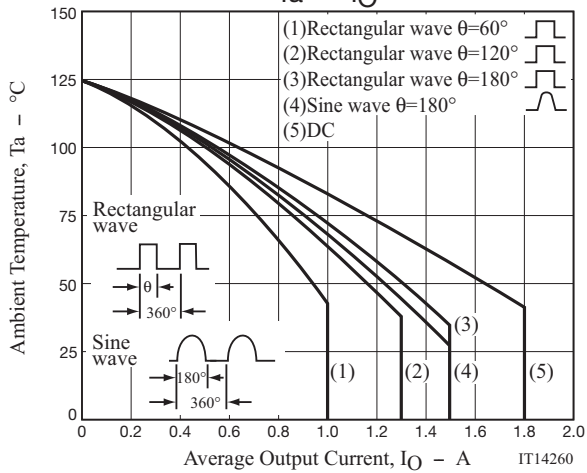
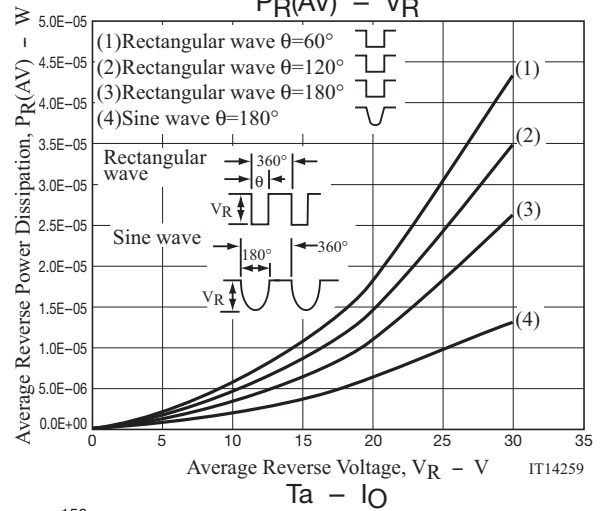
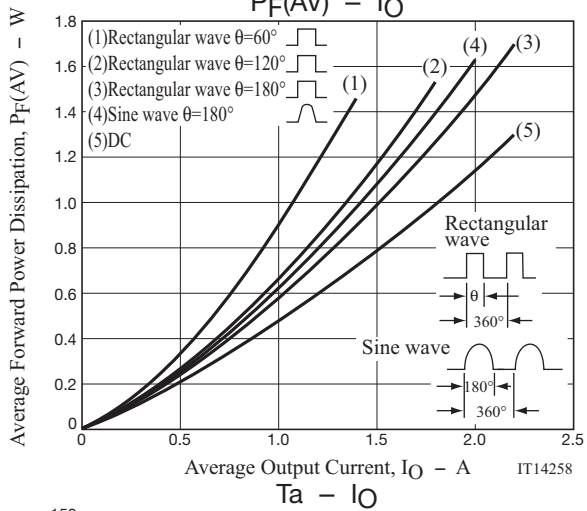
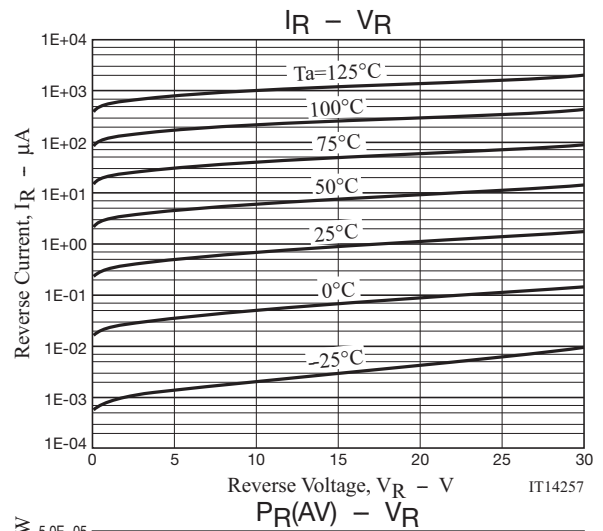
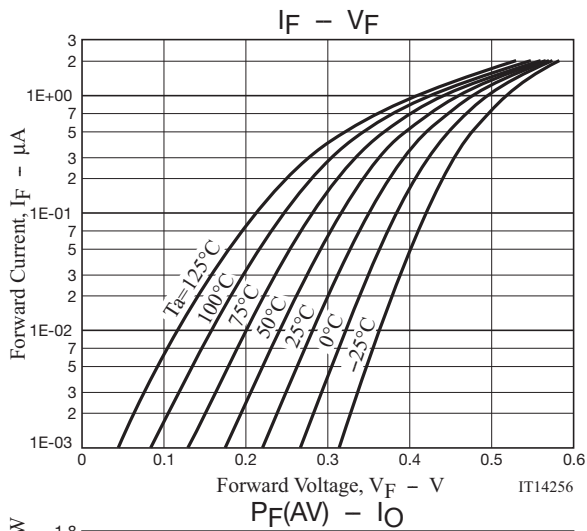
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V_R	$I_R=1\text{mA}$	30			V
Forward Voltage	V_{F1}	$I_F=1.0\text{A}$		0.48	0.53	V
	V_{F2}	$I_F=1.5\text{A}$		0.53	0.58	V
	V_{F3}	$I_F=2.0\text{A}$		0.57	0.62	V
Reverse Current	I_R	$V_R=15\text{V}$			7.5	μA
Interterminal Capacitance	C	$V_R=10\text{V}$, $f=1\text{MHz}$		30		pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=100\text{mA}$, See specified Test Circuit.			10	ns
Thermal Resistance	$R_{th(j-a)1}$	When mounted in Cu-foiled area of $0.96\text{mm}^2 \times 0.03\text{mm}$ on glass epoxy substrate		100		$^{\circ}\text{C} / \text{W}$
	$R_{th(j-a)2}$	When mounted on ceramic substrate ($900\text{mm}^2 \times 0.8\text{mm}$)		65		$^{\circ}\text{C} / \text{W}$

t_{rr} Test Circuit



Ordering Information

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



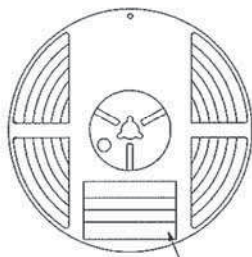
Embossed Taping Specification

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

Type No. →
LOT No. →
Quantity →
Origin →

Reel label, Inner box label
(unit:mm)

TYPE	0000000000
LOT	00
QTY	0,000 (LEAD FREE)
SPECIAL	ASSEMBLY:**** (DIFFUSION:****)

Outer box label

It is a label at the time of factory shipments.
The form of a label may change in physical
distribution process.

TYPE CODE	0000000000
TYPE	00000000
QTY	0,000 PCS (LEAD FREE)
LOT	00000000
PACKAGE	00000000
SPECIAL	ASSEMBLY:**** (DIFFUSION:****)

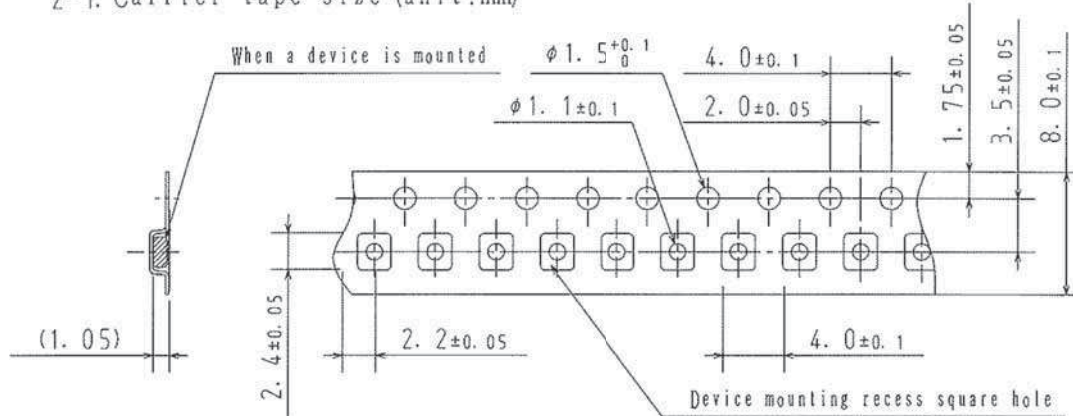
NOTE (1)

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

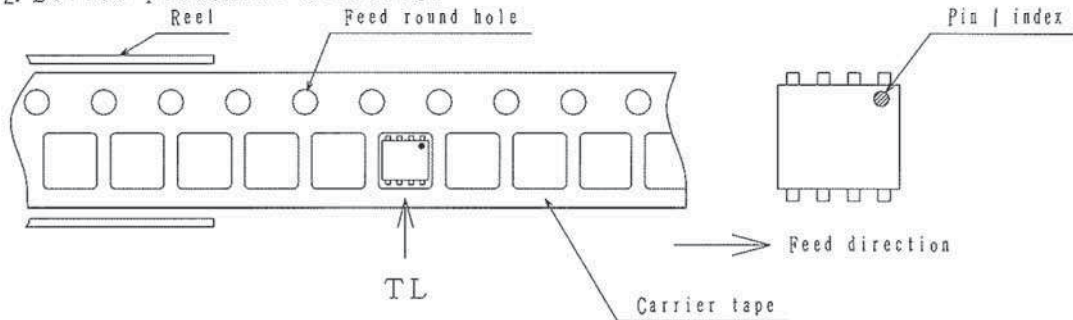
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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

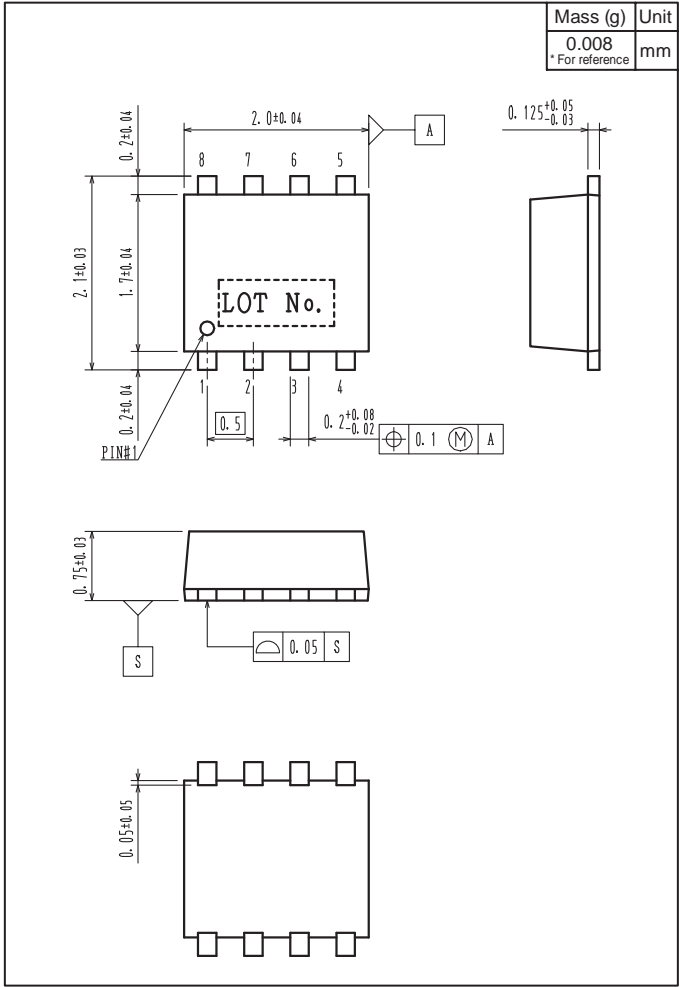


2-2. Device placement direction

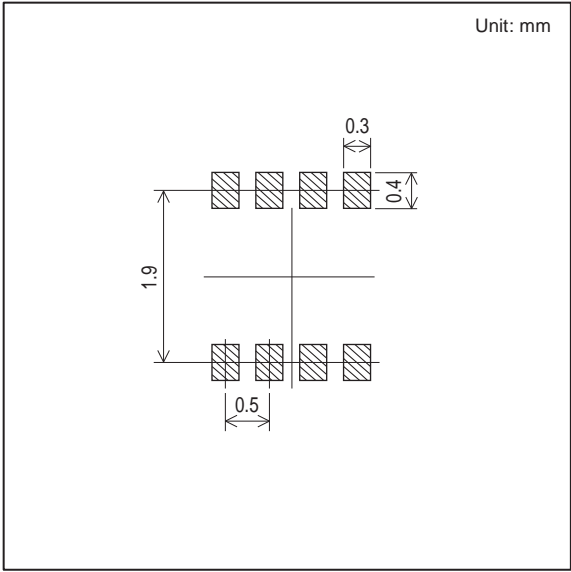


Those with pin 1 index on the feed hole side.....TL

Outline Drawing
SBE818-TL-E



Land Pattern Example



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