



SBE818

Schottky Barrier Diode

30V, 2A, Low I_R , Non-Monolithic Dual EMH8 Common Cathode

ON Semiconductor®

<http://onsemi.com>

Applications

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

Features

- Composite type device with 2 low I_R 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	$^\circ C$

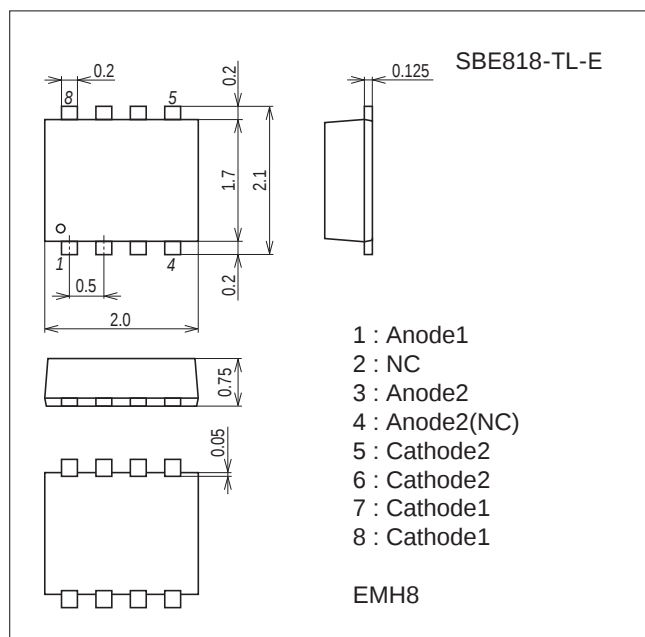
*: The absolute maximum ratings and electrical characteristics refer to those between Terminal 1 and Terminal 7 (or 8), and between Terminal 3 and Terminal 5 (or 6)

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)

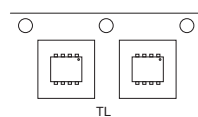
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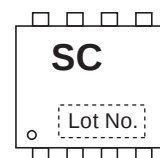
Product & Package Information

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

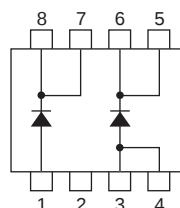
Packing Type : TL



Marking



Electrical Connection



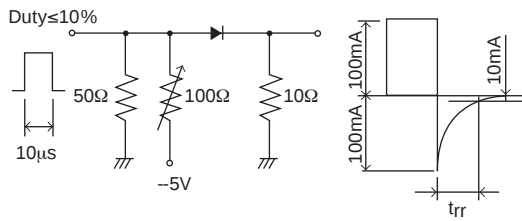
*: Terminal 4 is used for the purposes such as test. Although it is connected to Anode 2, please handle it as NC Terminal.

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

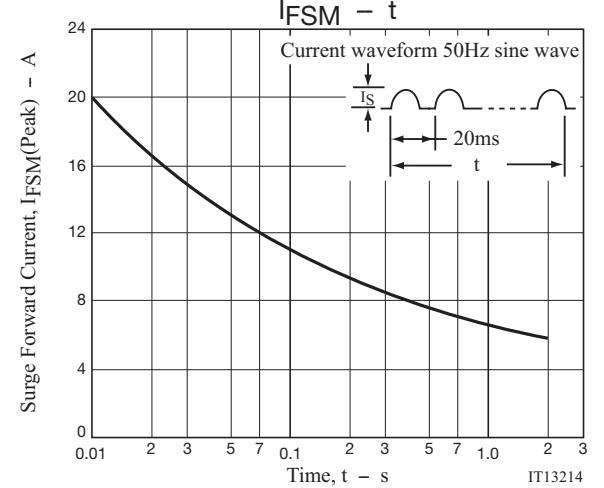
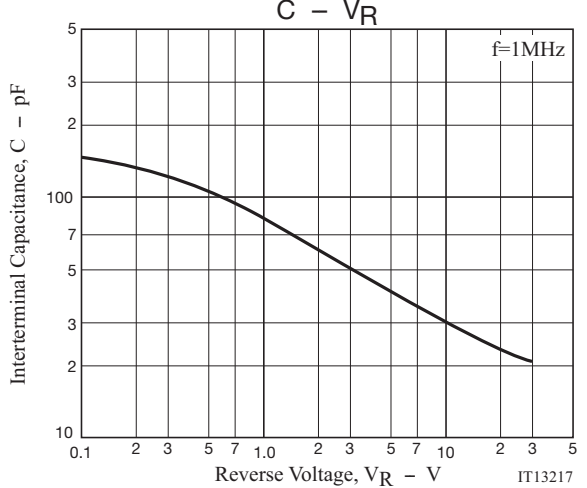
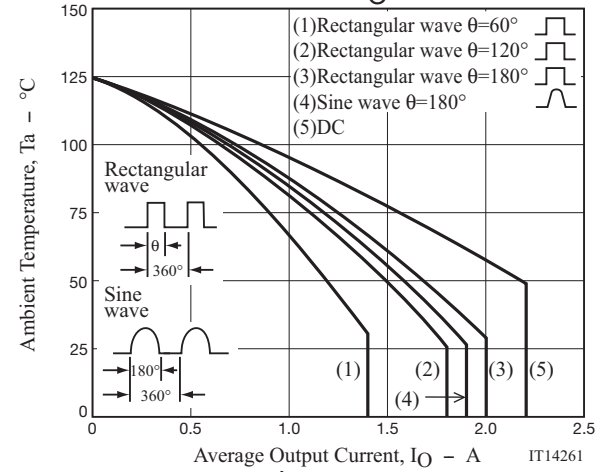
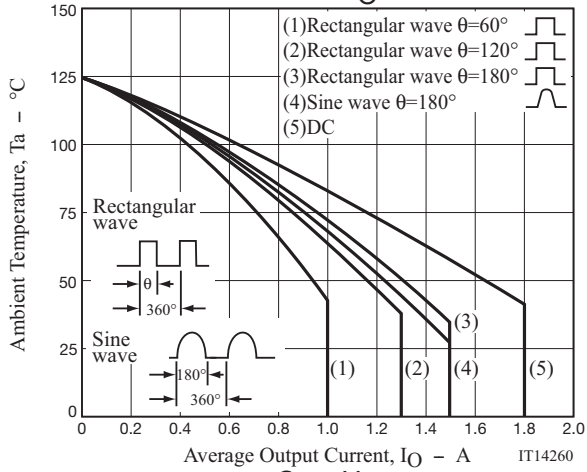
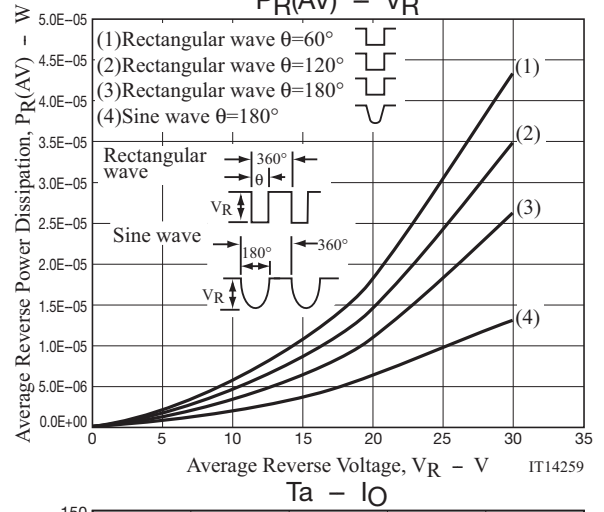
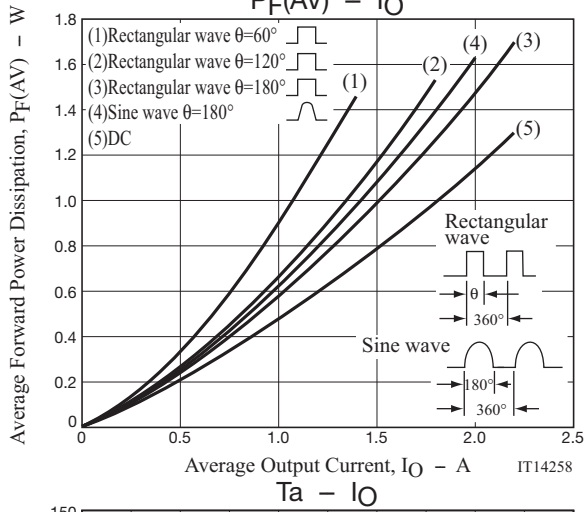
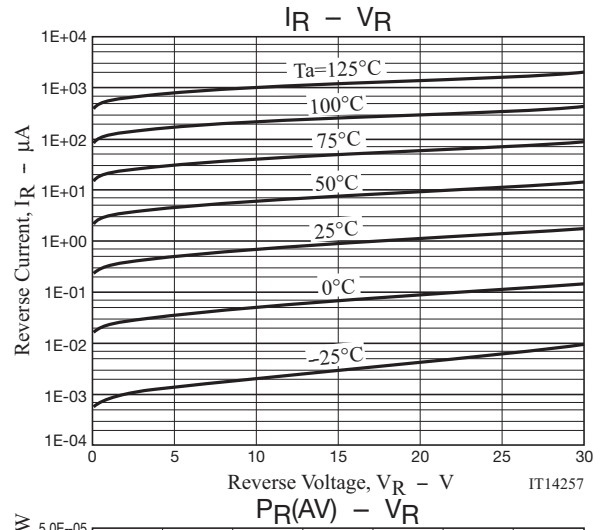
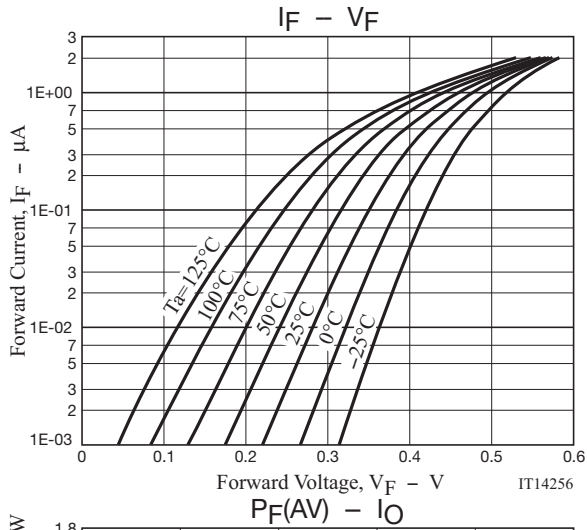
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V_R	$I_R=1\text{mA}$	30			V
Forward Voltage	V_{F1}	$I_F=1.0\text{A}$		0.48	0.53	V
	V_{F2}	$I_F=1.5\text{A}$		0.53	0.58	V
	V_{F3}	$I_F=2.0\text{A}$		0.57	0.62	V
Reverse Current	I_R	$V_R=15\text{V}$			7.5	μA
Interterminal Capacitance	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



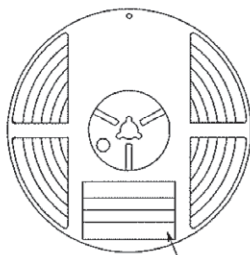
Embossed Taping Specification

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
SPECIAL	LEAD FREE *
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	00000000000000000000
TYPE	0000000000
QTY	0,000 PCS
LOT	0000000000
PACKAGE	0000000000
SPECIAL	***** (DIFFUSION:****)
ASSEMBLY	***** (DIFFUSION:****)

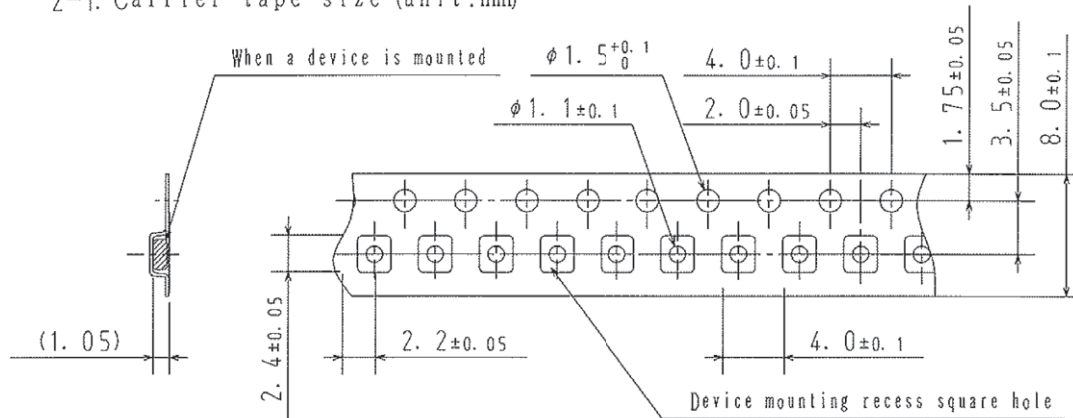
NOTE (1)

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

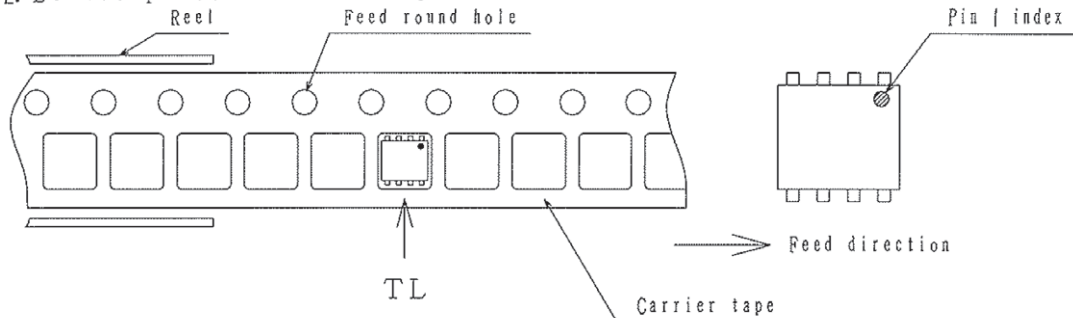
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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

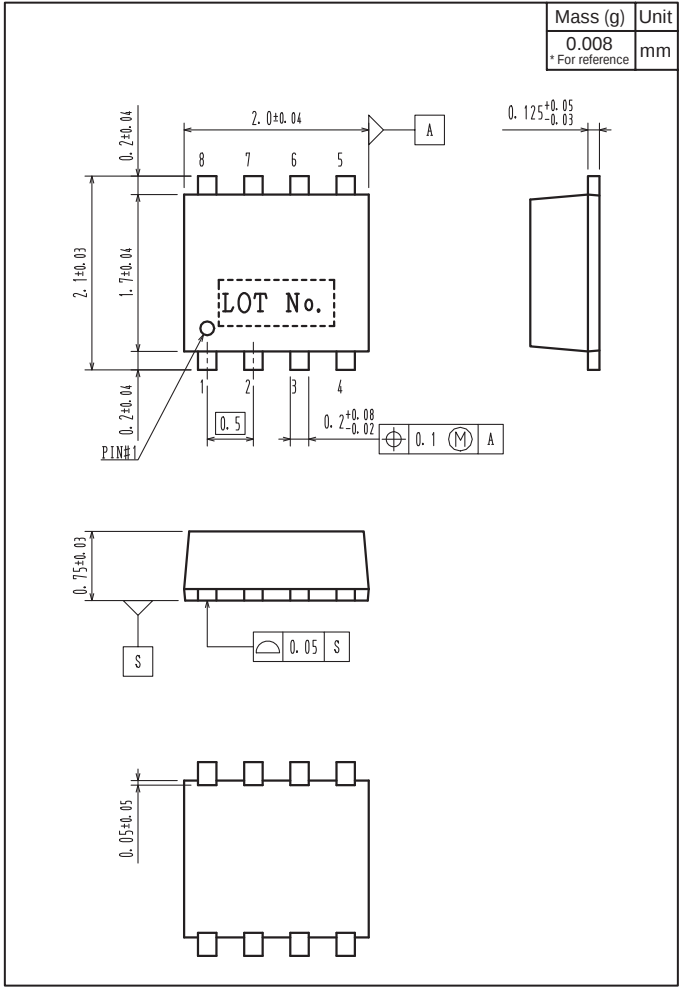


2-2. Device placement direction

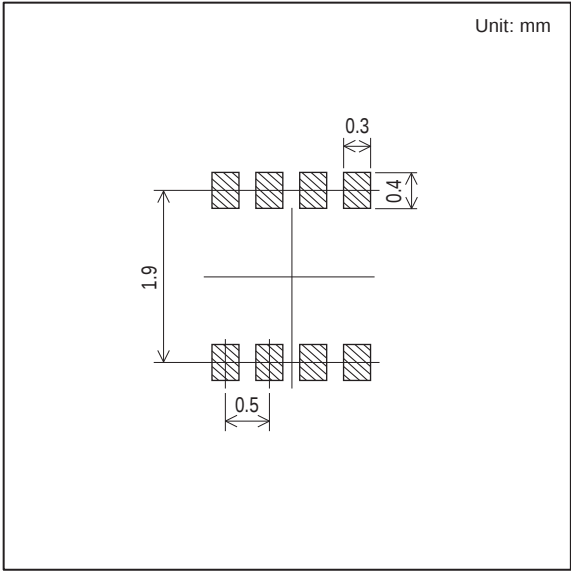


Those with pin 1 index on the feed hole side.....TL

Outline Drawing
SBE818-TL-E



Land Pattern Example



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