Ordering number : ENA0471A

# SBS818

## Schottky Barrier Diode

### 30V, 2A, Low $V_F$, Non-Monolithic Dual EMH8 Common Cathode

ON Semiconductor®

http://onsemi.com

## Applications

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

## Features

- Low switching noise
- Low forward voltage ($I_F$=2.0A, $V_F$ max=0.52V)
- Ultrasmall package permitting applied sets to be small and slim (Mounting height 0.75mm)

## Specifications

### Absolute Maximum Ratings at Ta=25°C (Value per element)

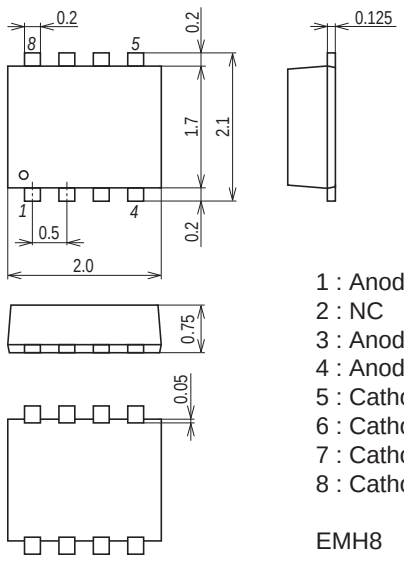
| Parameter | Symbol | Conditions | Ratings | Unit |
|---|---|---|---|---|
| Repetitive Peak Reverse Voltage | $V_{RRM}$ | | 30 | V |
| Nonrepetitive Peak Reverse Surge Voltage | $V_{RSM}$ | | 30 | V |
| Average Output Current | $I_O$ | When mounted on ceramic substrate (900mm$^2$×0.8mm) | 2.0 | A |
| | | When mounted on glass epoxy substrate (0.96mm$^2$×0.03mm) | 1.5 | A |
| Surge Forward Current | $I_{FSM}$ | 50Hz sine wave, 1 cycle | 20 | A |
| Junction Temperature | Tj | | −55 to +125 | °C |
| Storage Temperature | Tstg | | −55 to +125 | °C |

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)

7045-004




SBS818-TL-E

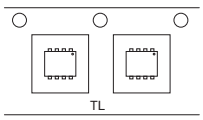
1 : Anode1
2 : NC
3 : Anode2
4 : Anode2(NC)
5 : Cathode2
6 : Cathode2
7 : Cathode1
8 : Cathode1

EMH8

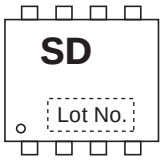
### Product & Package Information

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

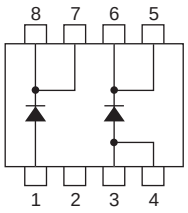
### Packing Type : TL




### Marking




### Electrical Connection



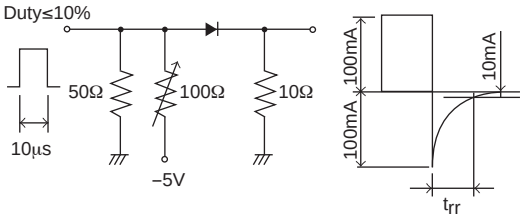

*: Terminal 4 is used for the purposes such as test. Although it is connected to Anode 2, please handle it as NC Terminal.

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

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---|---|---|---|---|---|
| | | | min | typ | max | |
| Reverse Voltage | $V_R$ | $I_R$=1mA | 30 | | | V |
| Forward Voltage | $V_F$1 | $I_F$=1.0A | | 0.37 | 0.42 | V |
| | $V_F$2 | $I_F$=1.5A | | 0.42 | 0.47 | V |
| | $V_F$3 | $I_F$=2.0A | | 0.46 | 0.52 | V |
| Reverse Current | $I_R$ | $V_R$=15V | | | 350 | μA |
| Interterminal Capacitance | C | $V_R$=10V, f-1MHz | | 30 | | pF |
| Reverse Recovery Time | $t_{rr}$ | $I_F$=$I_R$=100mA, See specified Test Circuit. | | | 10 | ns |
| Thermal Resistance | Rth(j-a)1 | When mounted in Cu-foiled area of 900mm²×0.8mm on glass epoxy substrate | | 100 | | °C / W |
| | Rth(j-a)2 | When mounted on ceramic substrate (900mm²×0.8mm) | | 65 | | °C / W |

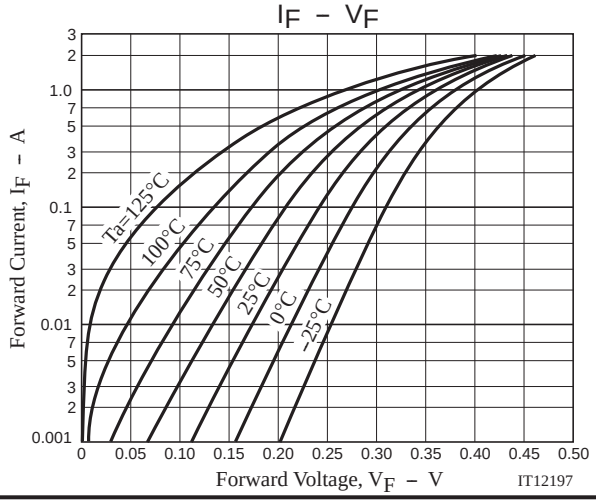
*: The absolute maximum ratings and electrical characteristics refer to those between Terminal 1 and Terminal 7 (or 8), and between Terminal 3 and Terminal 5 (or 6).

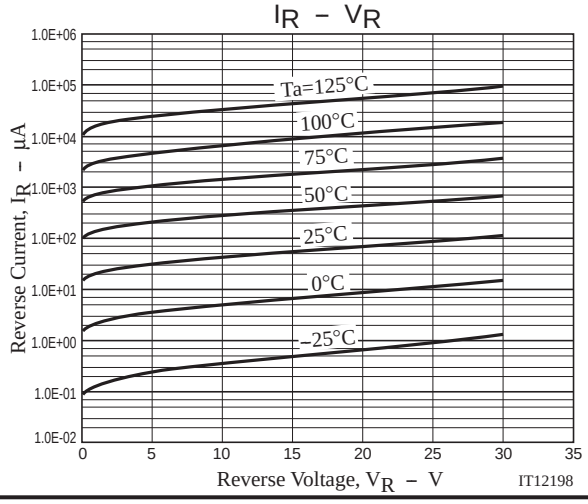
## $t_{rr}$ Test Circuit

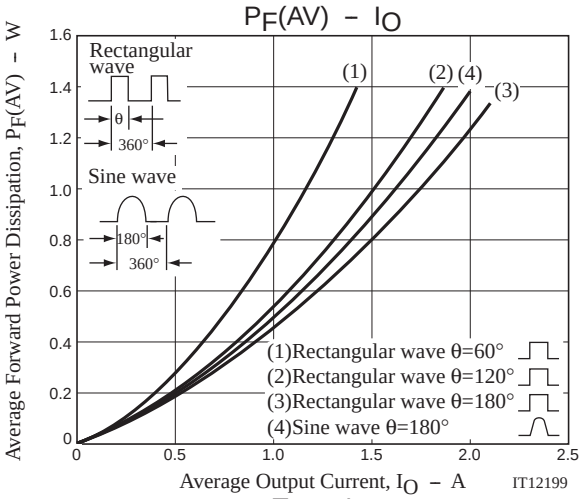


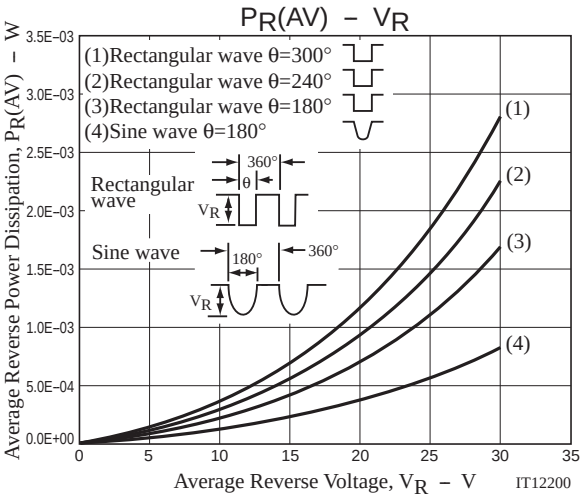

## Ordering Information

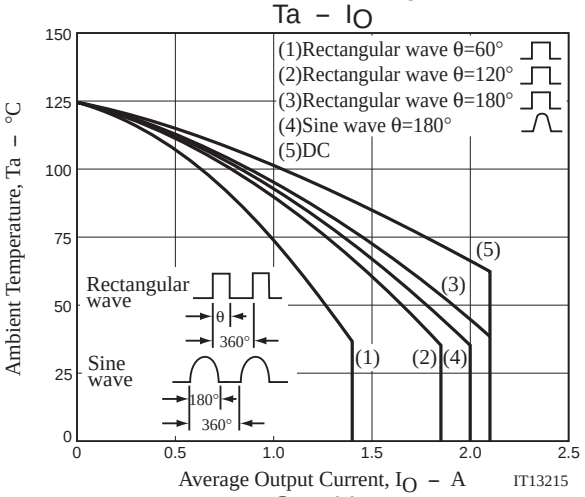
| Device | Package | Shipping | memo |
|---|---|---|---|
| SBS818-TL-E | EMH8 | 3,000pcs./reel | Pb Free |

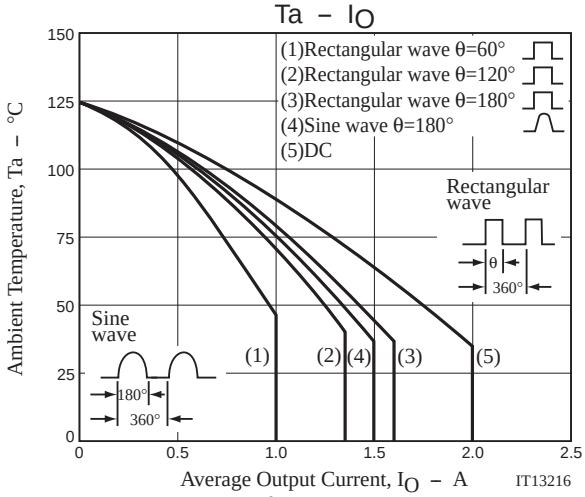


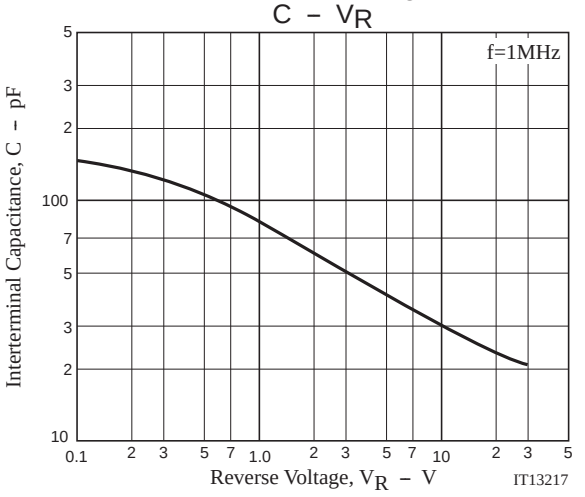



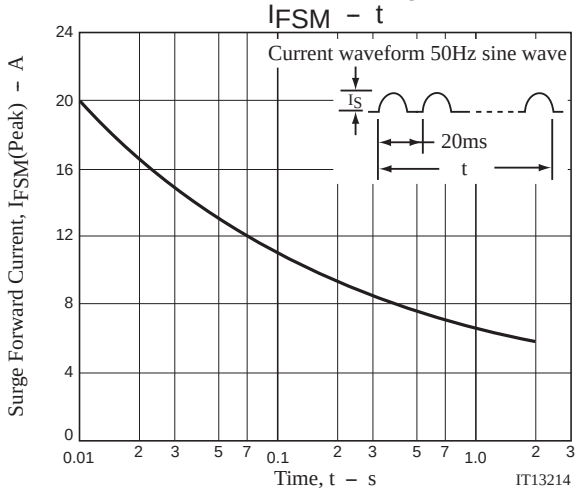


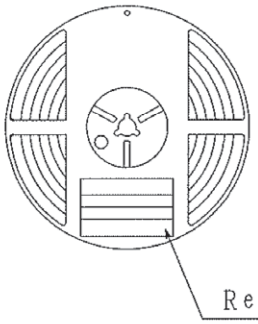
**Embossed Taping Specification**

SBS818-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<br>Dimensions:mm (external)<br>183×72×185 | 6 inner boxes contained<br>Dimensions:mm (external)<br>440×195×210 |

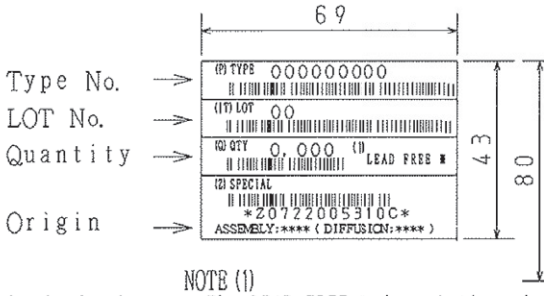
Packing method



Reel label

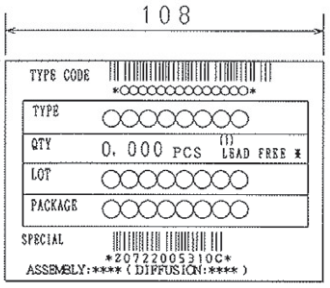
Reel label, Inner box label

(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.



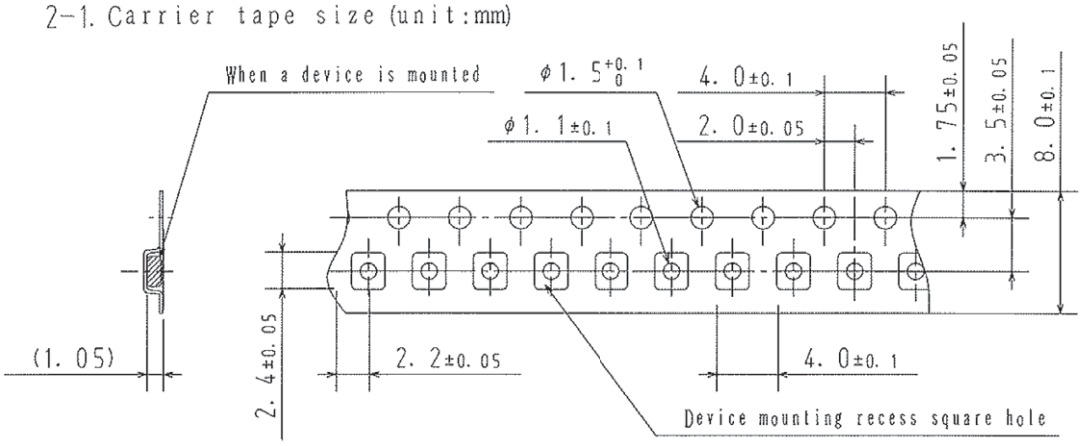

NOTE (1)

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

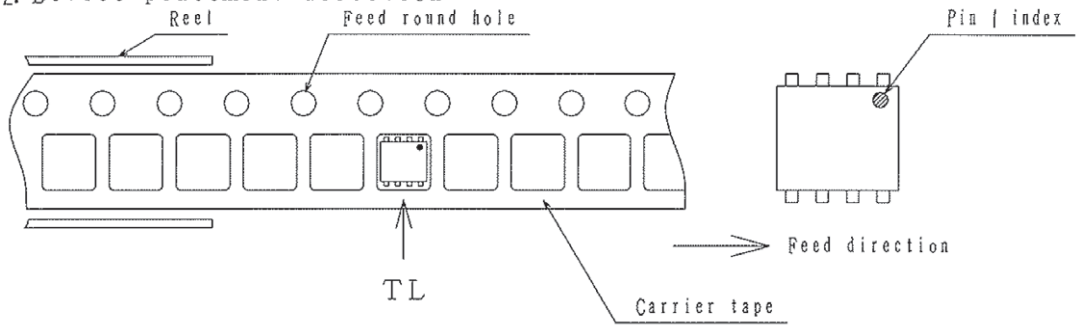
| Label | JEITA Phase |
|---|---|
| LEAD FREE 3 | JEITA Phase 3A |
| LEAD FREE 4 | JEITA Phase 3 |

## 2. Taping configuration

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



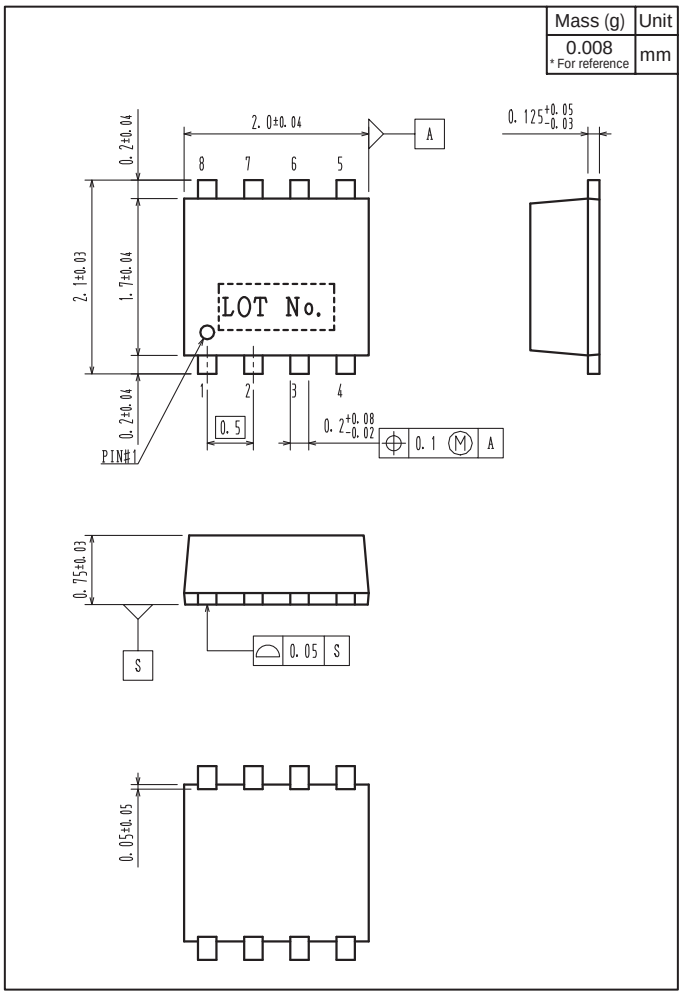

### 2-2. Device placement direction




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

## Outline Drawing

SBS818-TL-E




## Land Pattern Example