



# SB80W06T

## Schottky Barrier Diode 60V, 8A, Low IR, Monolithic Dual TP Common Cathode

ON Semiconductor®

<http://onsemi.com>

### Applications

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

### Features

- Low forward voltage ( $V_F \text{ max}=0.6\text{V}$ )
- Low switching noise
- Halogen free compliance
- Fast reverse recovery time
- High reliability due to highly reliable planar structure

### Specifications

Absolute Maximum Ratings at  $T_a=25^\circ\text{C}$

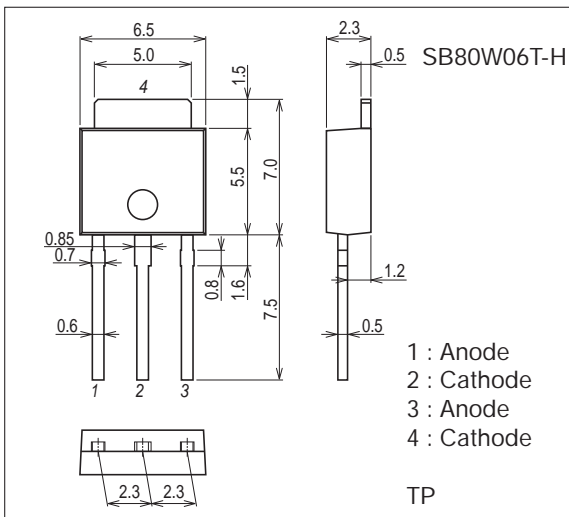
| Parameter                                | Symbol    | Conditions | Ratings | Unit |
|--|-----------|------------|---------|------|
| Repetitive Peak Reverse Voltage          | $V_{RRM}$ |            | 60      | V    |
| Nonrepetitive Peak Reverse Surge Voltage | $V_{RSM}$ |            | 66      | V    |

Continued on next page.

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.

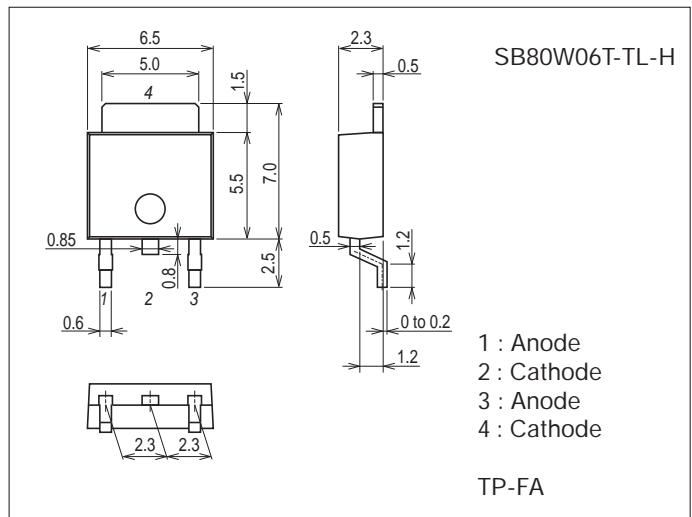
### Package Dimensions

unit : mm (typ)  
7518-001



### Package Dimensions

unit : mm (typ)  
7003-002

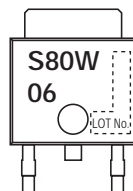


### Product & Package Information

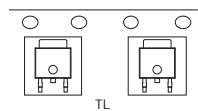
- Package : TP
- JEITA, JEDEC : SC-64, TO-251, SOT-553, DPAK
- Minimum Packing Quantity : 500 pcs./bag

- Package : TP-FA
- JEITA, JEDEC : SC-63, TO-252, SOT-428, DPAK
- Minimum Packing Quantity : 700 pcs./reel

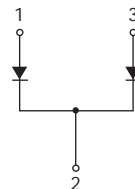
### Marking (TP, TP-FA)



### Packing Type (TP-FA) : TL



### Electrical Connection



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Continued from preceding page.

| Parameter              | Symbol    | Conditions   | Ratings     | Unit             |
|------------------------|-----------|--|-------------|------------------|
| Average Output Current | $I_O^*2$  | 50Hz resistive load, sine wave $T_c=130^\circ\text{C}$ | 4           | A                |
|                        | $I_O^*1$  | 50Hz resistive load, sine wave $T_c=83^\circ\text{C}$  | 8           | A                |
| Surge Forward Current  | $I_{FSM}$ | 50Hz sine wave, 1 cycle                                | 40          | A                |
| Junction Temperature   | $T_j$     |  | -55 to +150 | $^\circ\text{C}$ |
| Storage Temperature    | $T_{stg}$ |  | -55 to +150 | $^\circ\text{C}$ |

Note) \*1. Indicates the total value

\*2. Value per element

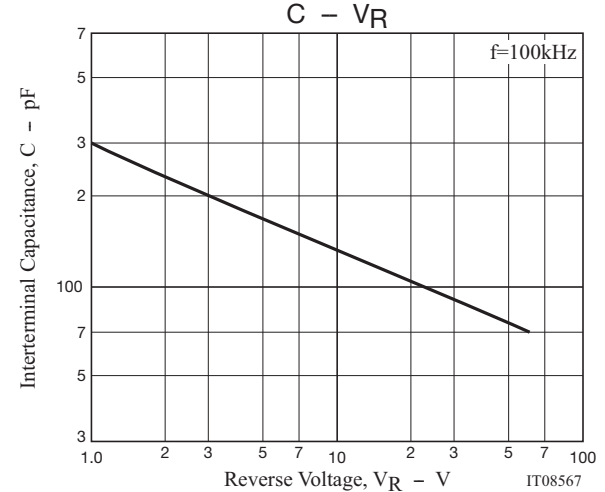
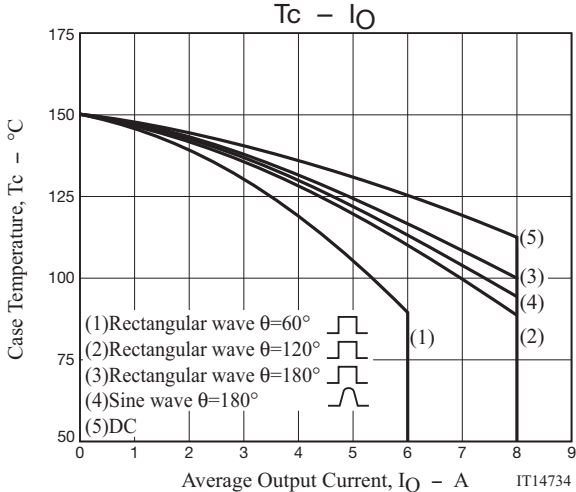
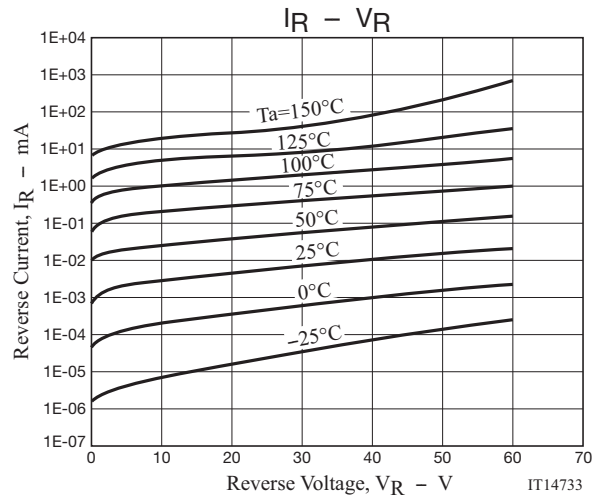
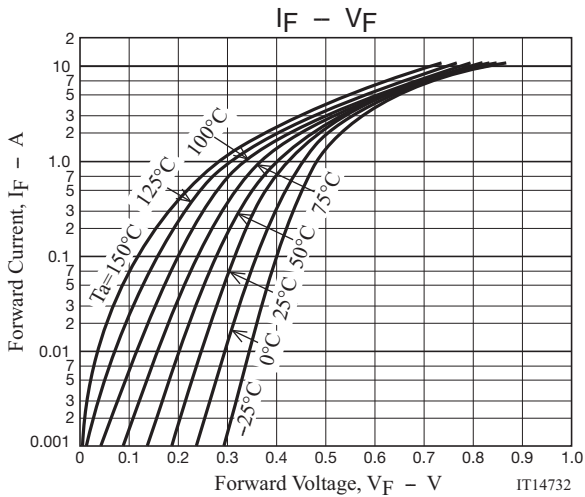
## Electrical Characteristics at $T_a=25^\circ\text{C}$

| Parameter                    | Symbol        | Conditions                                    | Ratings |     |     | Unit                        |
|------------------------------|---------------|---|---------|-----|-----|-----------------------------|
|                              |               |   | min     | typ | max |                             |
| Reverse Voltage              | $V_R$         | $I_R=1\text{mA}$ , $T_j=25^\circ\text{C}^*2$  | 60      |     |     | V                           |
| Forward Voltage              | $V_F$         | $I_F=3.0\text{A}$ , $T_j=25^\circ\text{C}^*2$ |         |     | 0.6 | V                           |
| Reverse Current              | $I_R$         | $V_R=30\text{V}$ , $T_j=25^\circ\text{C}^*2$  |         |     | 0.1 | mA                          |
| Interterminal Capacitance    | C             | $V_R=10\text{V}$ , $T_j=25^\circ\text{C}^*2$  |         | 130 |     | pF                          |
| Transient Thermal Resistance | $R_{th(j-c)}$ | Junction-Case : Smoothed DC                   |         | 6   |     | $^\circ\text{C} / \text{W}$ |

Note) \*2. Value per element

## Ordering Information

| Device        | Package | Shipping     | memo                     |
|---------------|---------|--------------|--------------------------|
| SB80W06T-H    | TP      | 500pcs./bag  | Pb Free and Halogen Free |
| SB80W06T-TL-H | TP-FA   | 700pcs./reel |                          |



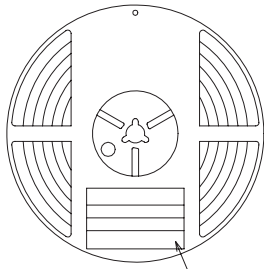
Taping Specification

SB80W06T-TL-H

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)  |
| TP-FA        | TP                | 700                                       | 2,100     | 12,600    | 3 reels contained<br>Dimensions:mm (external)<br>183×72×185 | 6 inner boxes contained<br>Dimensions:mm (external)<br>440×195×210 |

Packing method



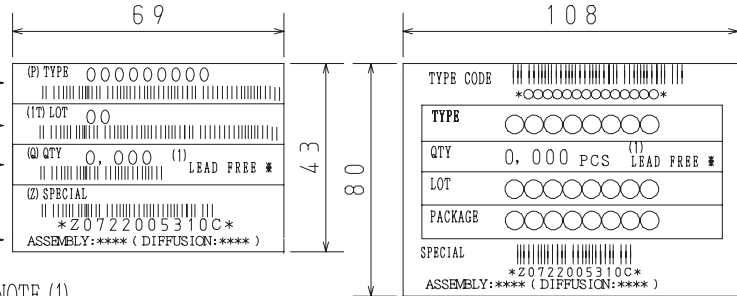
Type No.  
LOT No.  
Quantity  
Origin

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.



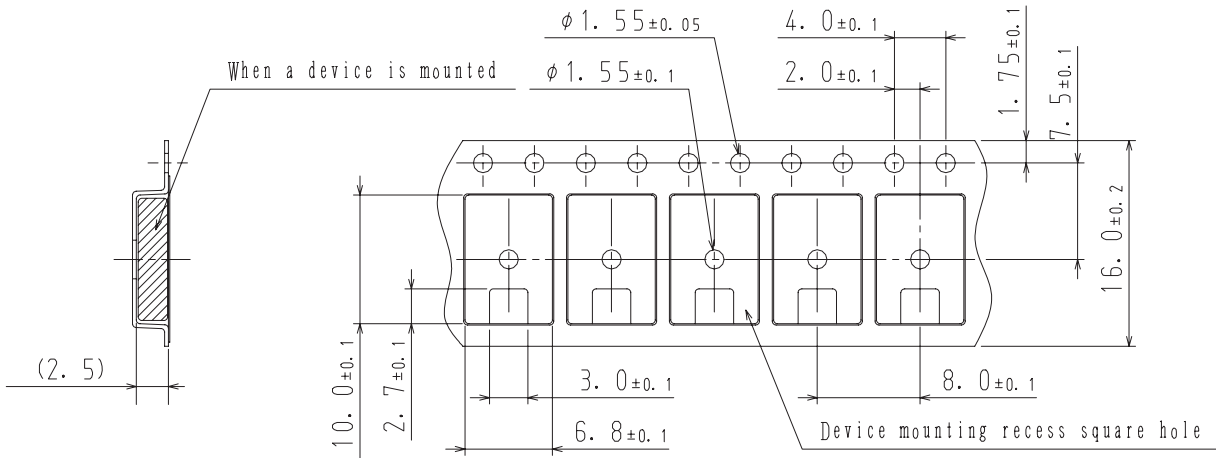
NOTE (1)

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

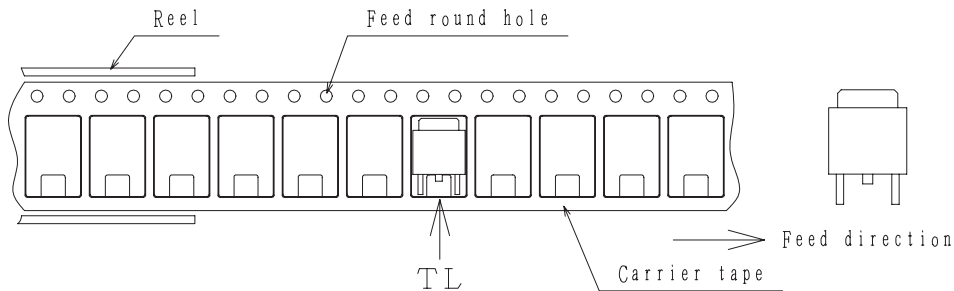
| Label       | JEITA Phase    |
|-------------|----------------|
| LEAD FREE 3 | JEITA Phase 3A |
| LEAD FREE 4 | JEITA Phase 3  |

Taping configuration

1. Carrier tape size (unit:mm)



2. Device placement direction

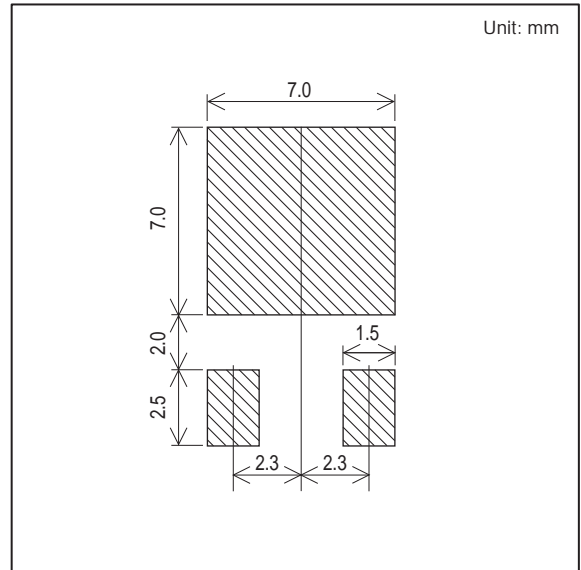
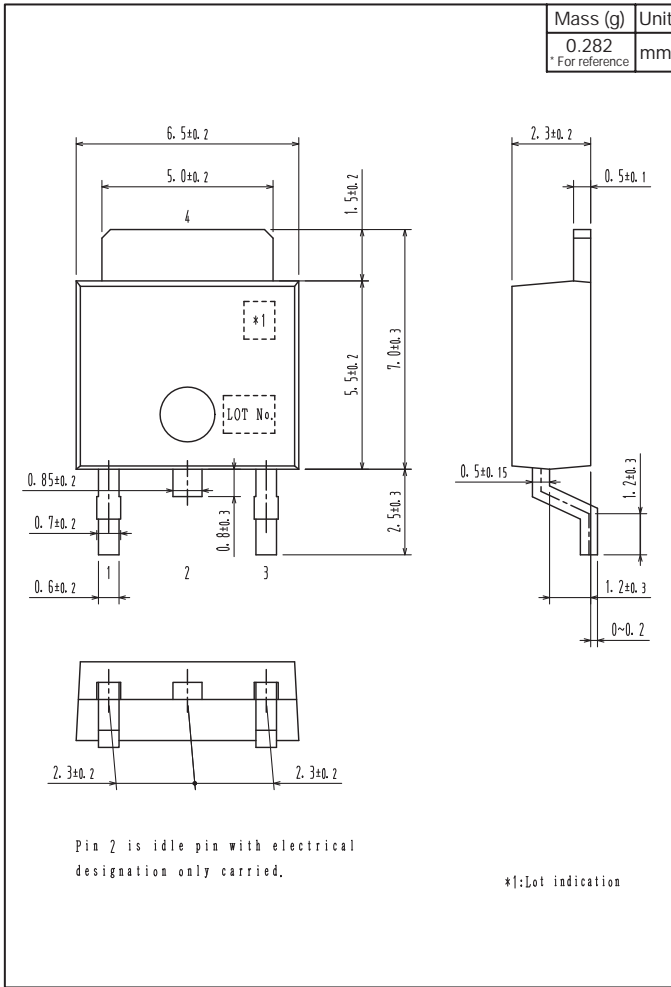


Those with one electrode terminal on the feed hole side.....TL

# SB80W06T

## Outline Drawing SB80W06T-TL-H

## Land Pattern Example



# SB80W06T

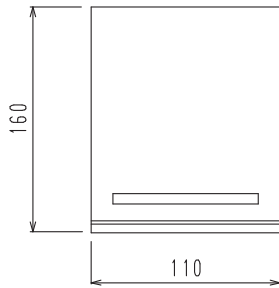
## Bag Packing Specification

SB80W06T-H

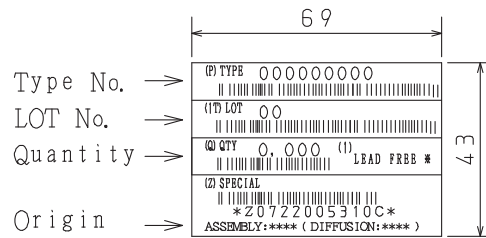
### 1. Packing Format

| Package Name | Maximum Number of devices contained (pcs) |            |             |             |
|--------------|---|------------|-------------|-------------|
|              | Bag                                       | Inner box  | Outer box   |             |
| TP           | 500                                       | B-1        | A-1         | A-2         |
|              |   | 10,000     | 50,000      | 30,000      |
|              | Packing format (Dimensions:mm (external)) |            |             |             |
|              |   | Inner box  | Outer box   |             |
|              |   | B-1        | A-1         | A-2         |
|              |   | 445×225×55 | 470×250×300 | 470×250×190 |

### 2. Bag dimensions (unit:mm)



### 3. Bag label, Inner box label (unit:mm)



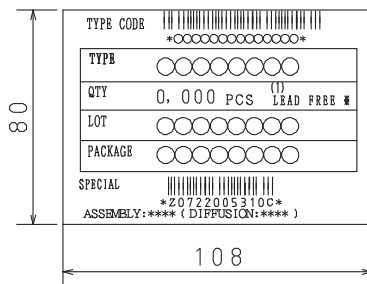
### 4. Outer box label (unit:mm)

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.

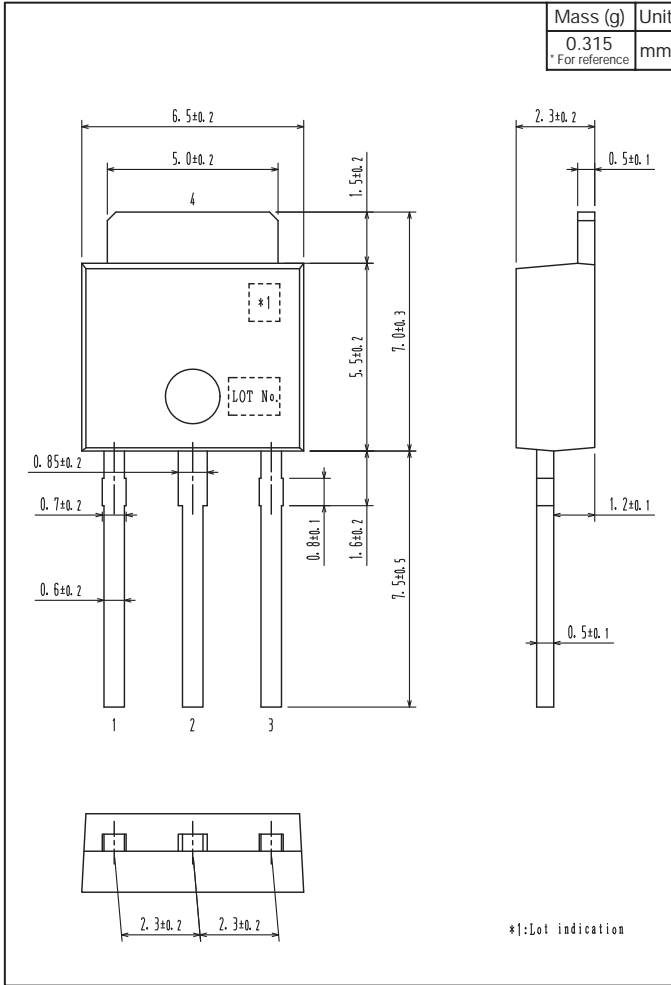
| Label       | JEITA Phase    |
|-------------|----------------|
| LEAD FREE 3 | JEITA Phase 3A |
| LEAD FREE 4 | JEITA Phase 3  |



# SB80W06T

## Outline Drawing

SB80W06T-H



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