


**SANYO Semiconductors**

# DATA SHEET

## SBS813 — Low VF Schottky Barrier Diode 30V, 3.0A Rectifier

### Applications

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

### Features

- Small switching noise.
- Low forward voltage ( $I_F=3A$ ,  $V_F \text{ max}=0.42V$ ).
- Ultrasmall package permitting applied sets to be small and slim.

### Specifications

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

| 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                   | $I_O$     |                         | 3.0         | A                |
| Surge Forward Current                    | $I_{FSM}$ | 50Hz sine wave, 1 cycle | 20          | A                |
| Junction Temperature                     | $T_J$     |                         | -55 to +125 | $^\circ\text{C}$ |
| Storage Temperature                      | $T_{stg}$ |                         | -55 to +125 | $^\circ\text{C}$ |

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

| Parameter                 | Symbol        | Conditions                                              | Ratings |       |       | Unit                        |
|---------------------------|---------------|---------------------------------------------------------|---------|-------|-------|-----------------------------|
|                           |               |                                                         | min     | typ   | max   |                             |
| Reverse Voltage           | $V_R$         | $I_R=2.0\text{mA}$                                      | 30      |       |       | V                           |
| Forward Voltage           | $V_F$         | $I_F=2.0\text{A}$                                       |         | 0.335 | 0.385 | V                           |
|                           |               | $I_F=3.0\text{A}$                                       |         | 0.37  | 0.42  | V                           |
| Reverse Current           | $I_R$         | $V_R=15\text{V}$                                        |         |       | 1.4   | mA                          |
| Interterminal Capacitance | C             | $V_R=10\text{V}$ , $f=1\text{MHz}$                      |         | 90    |       | pF                          |
| Reverse Recovery Time     | $t_{rr}$      | $I_F=I_R=100\text{mA}$ , See specified Test Circuit.    |         |       | 20    | ns                          |
| Thermal Resistance        | $R_{th(j-a)}$ | Mounted on a ceramic board (1200mm <sup>2</sup> X0.8mm) |         | 50    |       | $^\circ\text{C} / \text{W}$ |

Marking : SF

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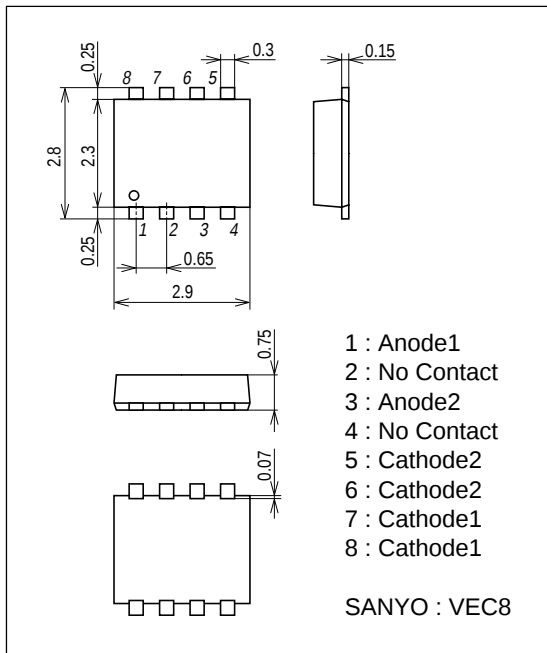
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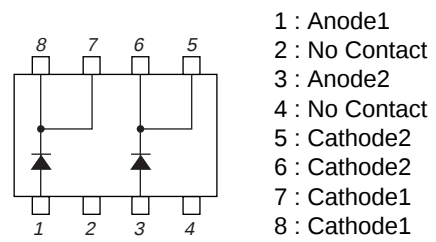
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## Package Dimensions

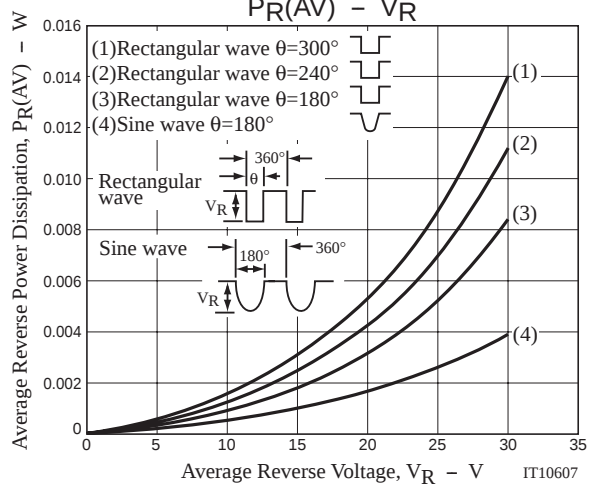
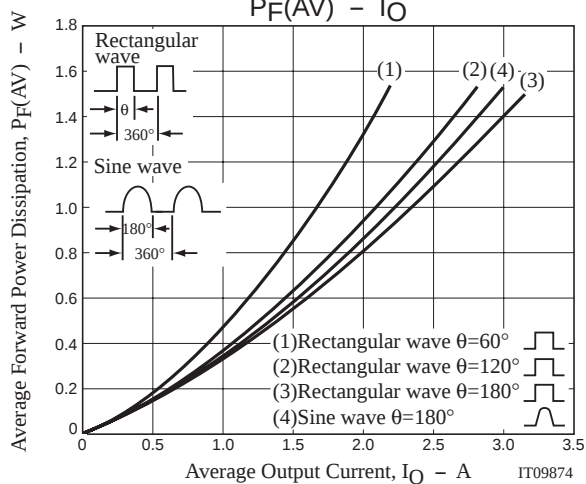
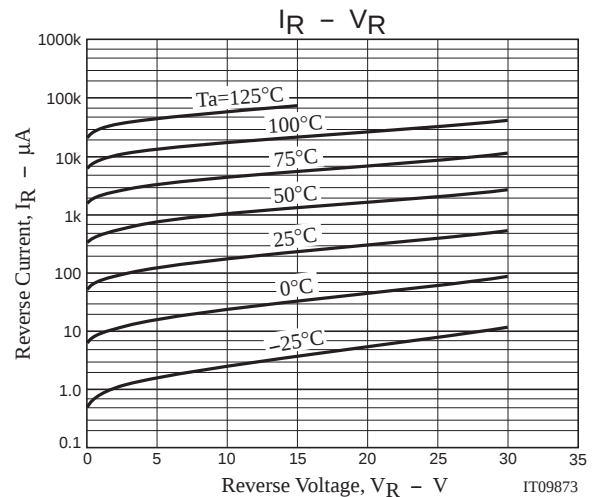
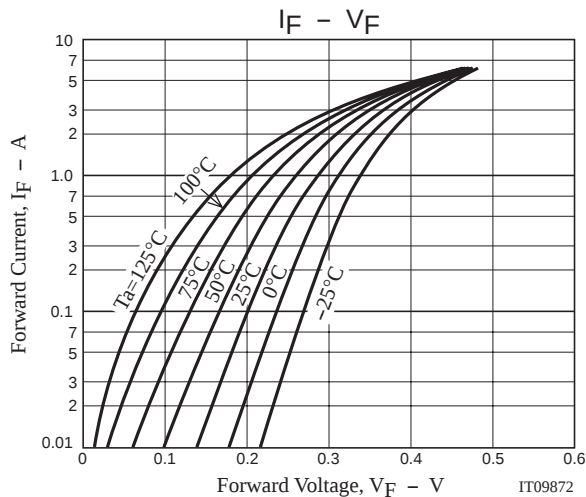
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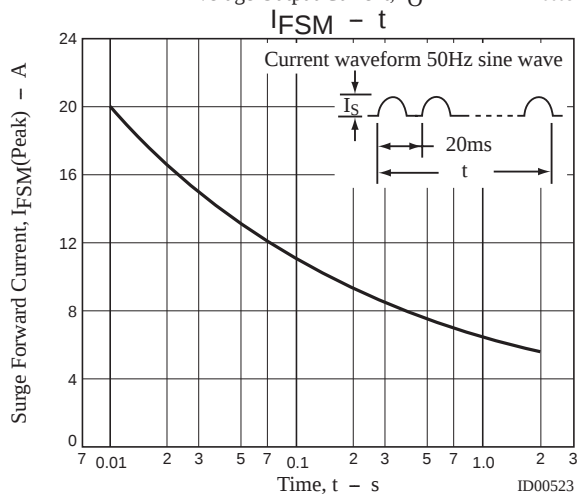
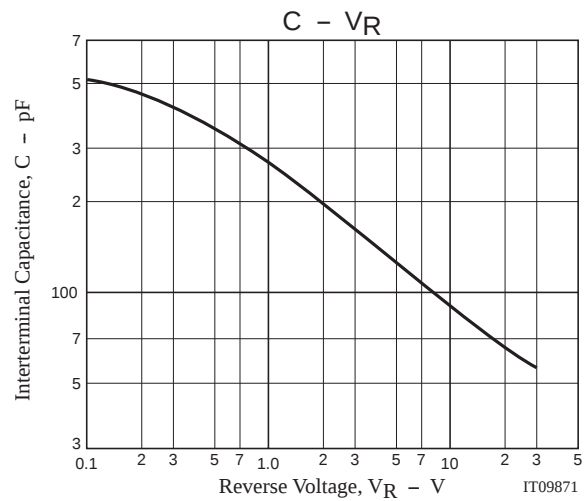
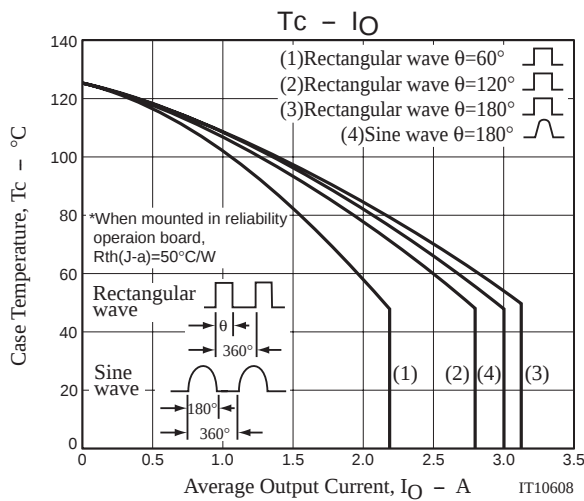


## Electrical Connection



Top view





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