



# SS2003M

## Schottky Barrier Diode 30V, 2.0A, Low VF, Single MCPH6

ON Semiconductor®

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### Applications

- High frequency rectification (switching regulators, converters, choppers)
- Halogen free compliance

### Features

- Small Switching noise
- Low forward voltage (IF=2A, VF max=0.40V)
- Small package permitting applied sets to be small and slim

### Specifications

Absolute Maximum Ratings at Ta=25°C

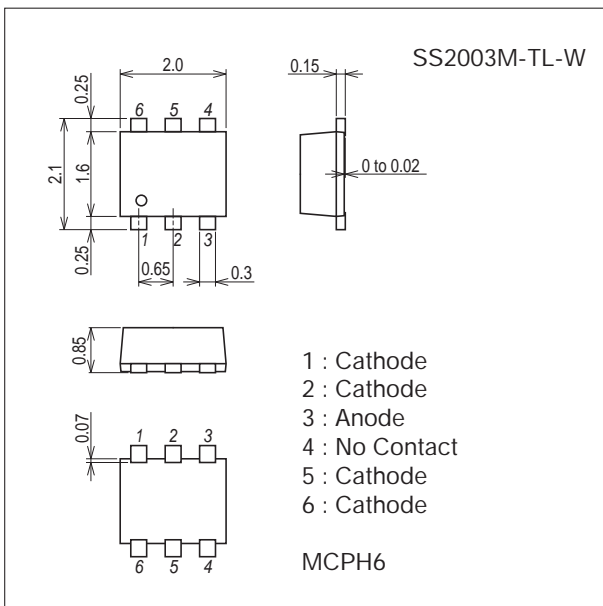
| Parameter                                | Symbol | Conditions              | Ratings     | Unit |
|------------------------------------------|--------|-------------------------|-------------|------|
| Repetitive Peak Reverse Voltage          | VRRM   |                         | 30          | V    |
| Nonrepetitive Peak Reverse Surge Voltage | VRSM   |                         | 30          | V    |
| Average Output Current                   | IO     |                         | 2.0         | A    |
| Surge Forward Current                    | IFSM   | 50Hz sine wave, 1 cycle | 10          | 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)

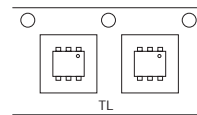
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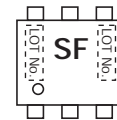
### Ordering & Package Information

| Device       | Package                          | Shipping           | memo                           |
|--------------|----------------------------------|--------------------|--------------------------------|
| SS2003M-TL-W | MCPH6<br>SC-88, SC-70-6, SOT-363 | 3,000<br>pcs./reel | Pb-Free<br>and<br>Halogen Free |

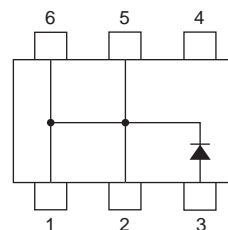
### Packing Type : TL



### Marking



### Electrical Connection

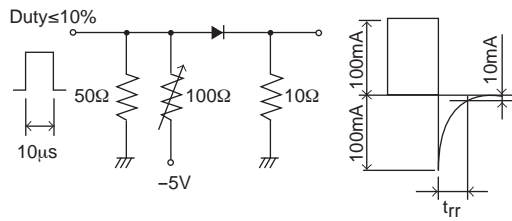


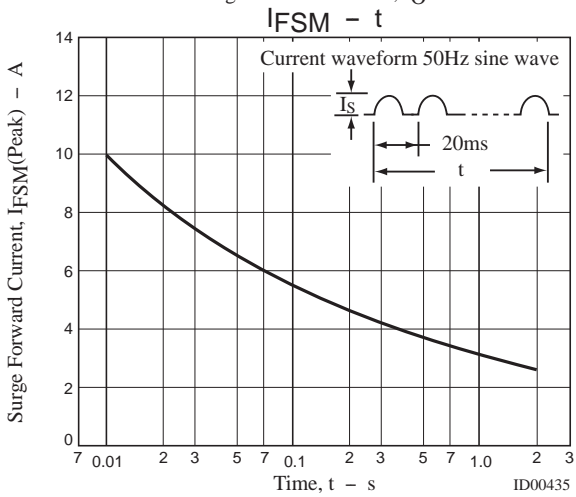
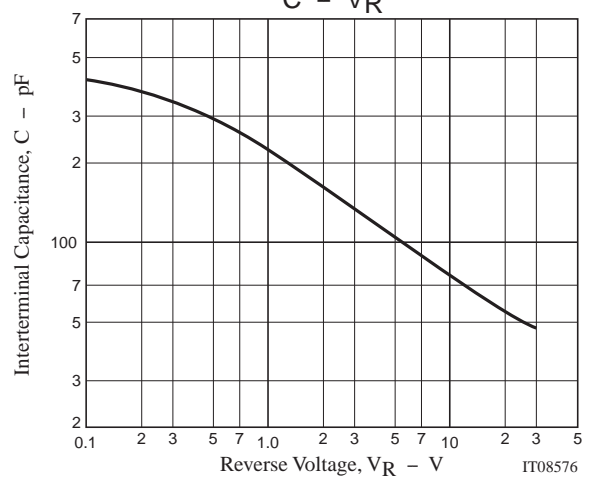
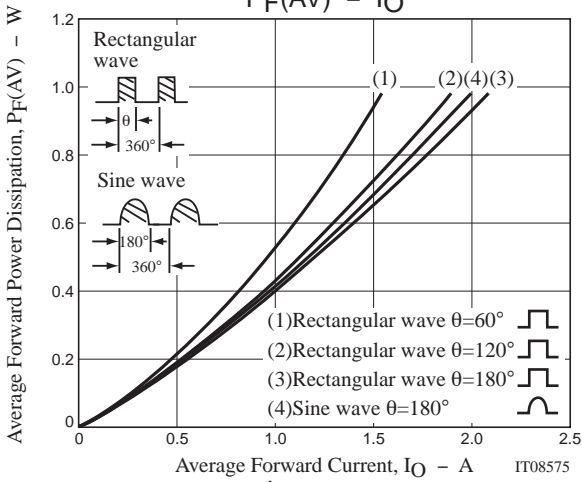
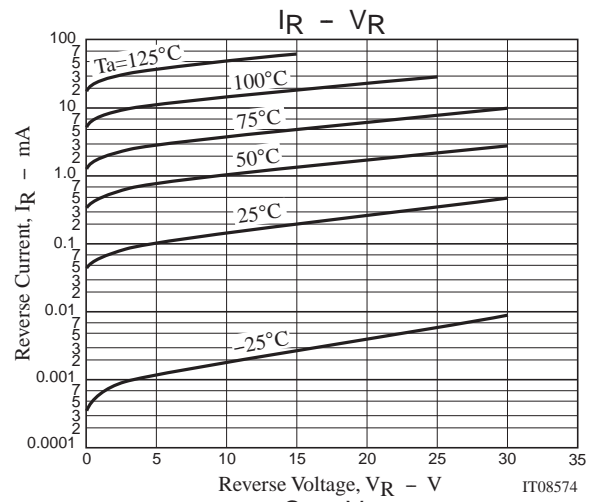
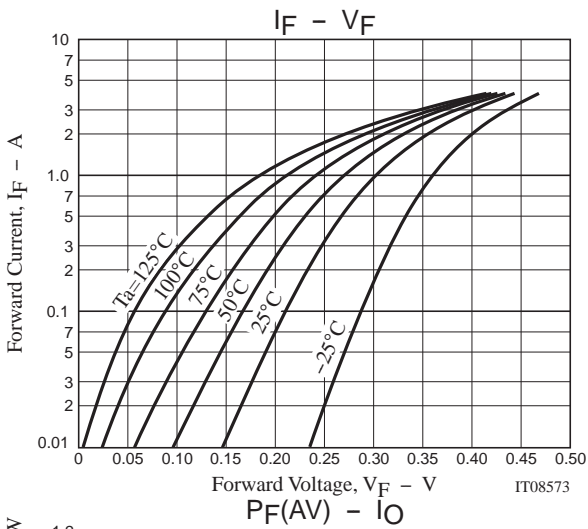
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## Electrical Characteristics at $T_a=25^\circ\text{C}$

| Parameter                 | Symbol         | Conditions                                                                                        | Ratings |      |      | Unit                        |
|---------------------------|----------------|---------------------------------------------------------------------------------------------------|---------|------|------|-----------------------------|
|                           |                |                                                                                                   | min     | typ  | max  |                             |
| Reverse Voltage           | $V_R$          | $I_R=2.0\text{mA}$                                                                                | 30      |      |      | V                           |
| Forward Voltage           | $V_F$          | $I_F=1.0\text{A}$                                                                                 |         | 0.30 | 0.35 | V                           |
|                           |                | $I_F=2.0\text{A}$                                                                                 |         | 0.35 | 0.40 | V                           |
| Reverse Current           | $I_R$          | $V_R=15\text{V}$                                                                                  |         |      | 1.25 | mA                          |
| Interterminal Capacitance | C              | $V_R=10\text{V}$ , $f=1\text{MHz}$                                                                |         | 75   |      | pF                          |
| Reverse Recovery Time     | $t_{rr}$       | $I_F=I_R=100\text{mA}$ , See specified Test Circuit.                                              |         |      | 20   | ns                          |
| Thermal Resistance        | $R_{th(j-a)1}$ | When mounted in Cu-foiled area of $1.44\text{mm}^2 \times 0.03\text{mm}$ on glass epoxy substrate |         | 93.4 |      | $^\circ\text{C} / \text{W}$ |
|                           | $R_{th(j-a)2}$ | When mounted on ceramic substrate ( $500\text{mm}^2 \times 0.8\text{mm}$ )                        |         | 71.4 |      | $^\circ\text{C} / \text{W}$ |

### $t_{rr}$ Test Circuit

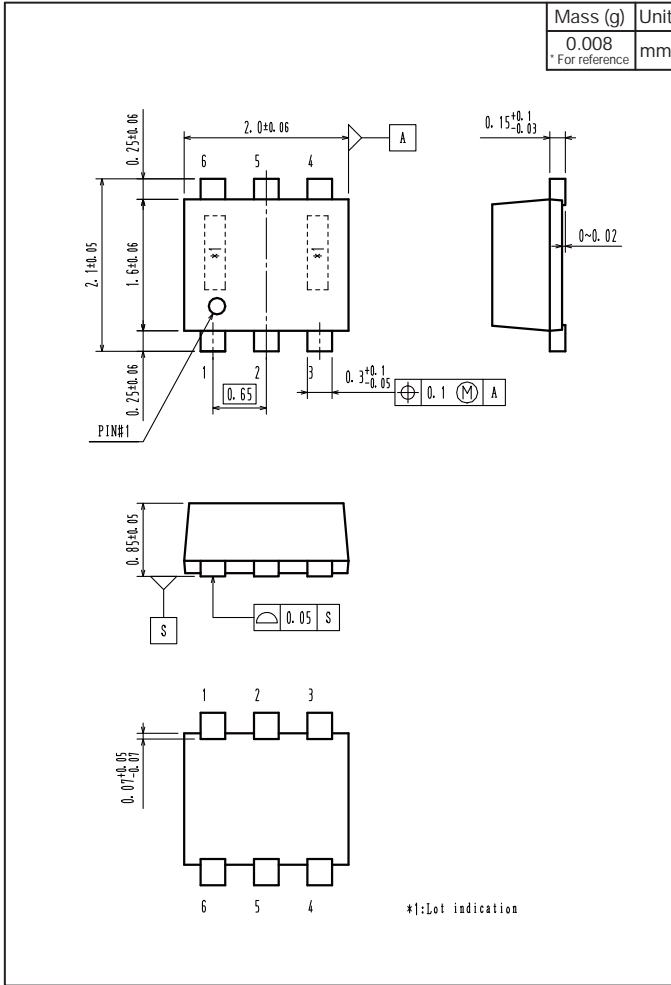




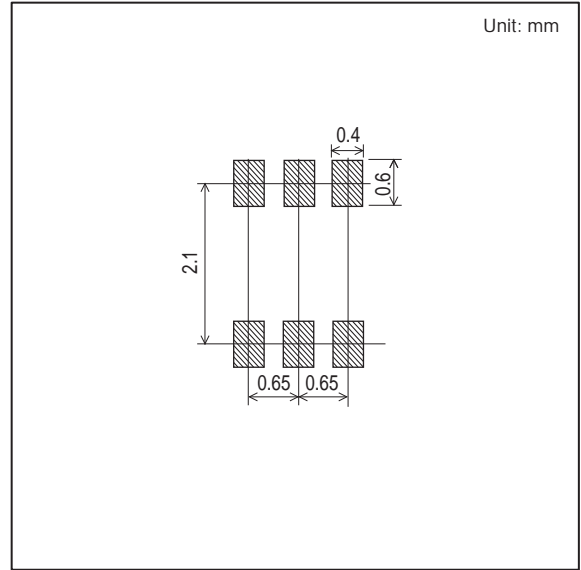
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## Outline Drawing

SS2003M-TL-W



## Land Pattern Example



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