



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

SS2003M — Schottky Barrier Diode 30V, 2.0A Rectifier

Applications

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

Features

- Small Switching noise.
- Low forward voltage ($I_F=2A$, $V_F \text{ max}=0.40V$).
- 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 | | 2.0 | A |
| Surge Forward Current | I_{FSM} | 50Hz sine wave, 1 cycle | 10 | 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 | $I_F=1.0\text{A}$ | | 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 | $R_{th(j-a)1}$ | Mounted in Cu-foiled area of $1.44\text{mm}^2 \times 0.03\text{mm}$ on glass epoxy board | | 93.4 | | $^\circ\text{C} / \text{W}$ |
| | $R_{th(j-a)2}$ | Mounted on a ceramic board ($500\text{mm}^2 \times 0.8\text{mm}$) | | 71.4 | | $^\circ\text{C} / \text{W}$ |

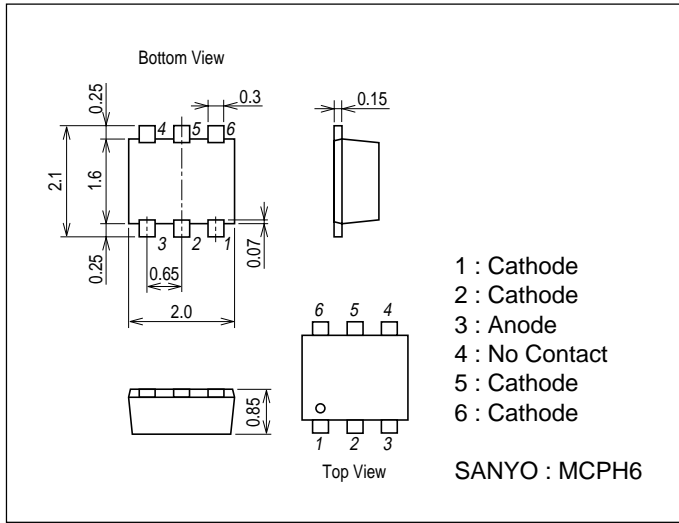
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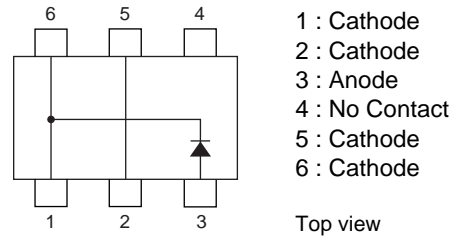
SS2003M

Package Dimensions

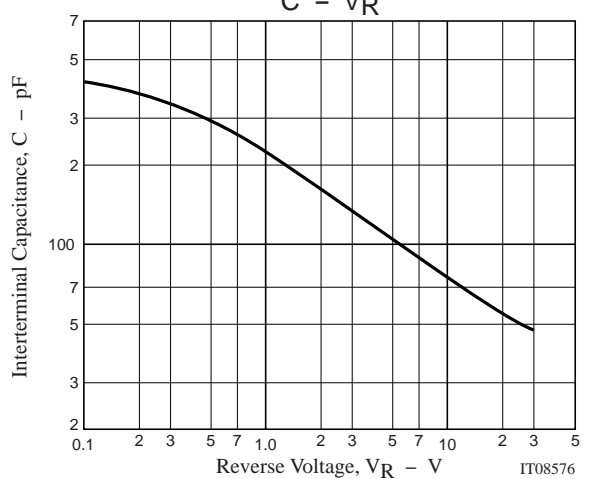
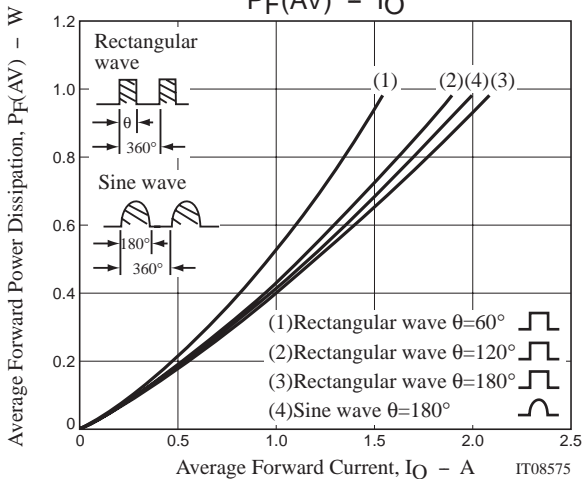
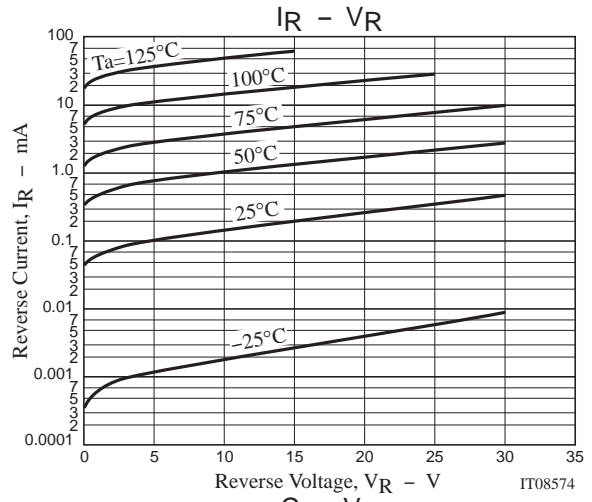
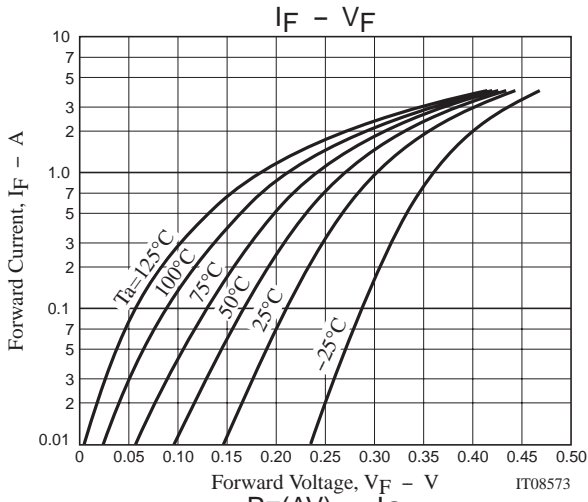
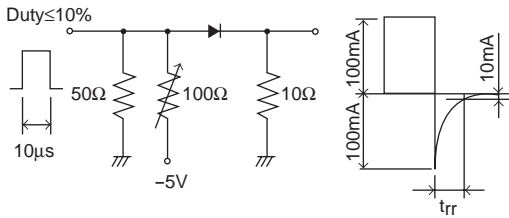
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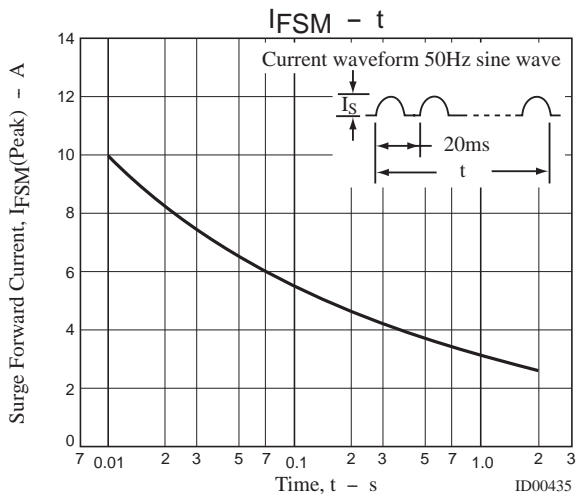


Electrical Connection



t_{rr} Test Circuit





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