



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

SB02-09C — Schottky Barrier Diode 90V, 200mA Rectifier

Applications

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

Features

- Low forward voltage (V_F max=0.7V).
- Fast reverse recovery time (t_{rr} max=10ns).
- Low switching noise.
- Low leakage current and 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} | | 90 | V |
| Nonrepetitive Peak Reverse Surge Voltage | V_{RSM} | | 95 | V |
| Average Output Current | I_O | | 200 | mA |
| Surge Forward Current | I_{FSM} | 50Hz sine wave, 1 cycle | 5 | 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 | $I_R=200\mu\text{A}$ | 90 | | | V |
| Forward Voltage | V_F | $I_F=200\text{mA}$ | | | 0.7 | V |
| Reverse Current | I_R | $V_R=45\text{V}$ | | | 50 | μA |
| Interterminal Capacitance | C | $V_R=10\text{V}$, $f=1\text{MHz}$ | | 10 | | pF |
| Reverse Recovery Time | t_{rr} | $I_F=I_R=100\text{mA}$, See specified Test Circuit. | | | 10 | ns |
| Thermal Resistance | Rth-j-a(1) | | | 420 | | $^\circ\text{C} / \text{W}$ |
| | Rth-j-a(2) | Mounted in Cu-foiled area of 16mm ² X0.2mm on glass epoxy board | | 330 | | $^\circ\text{C} / \text{W}$ |

Marking : D

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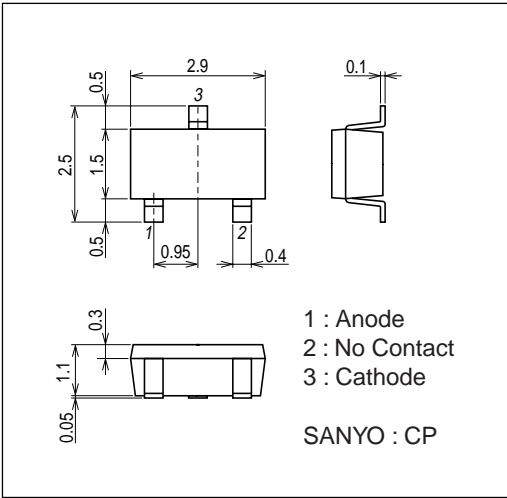
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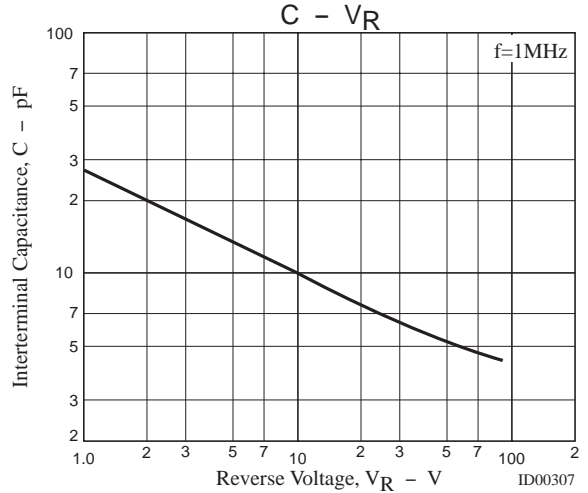
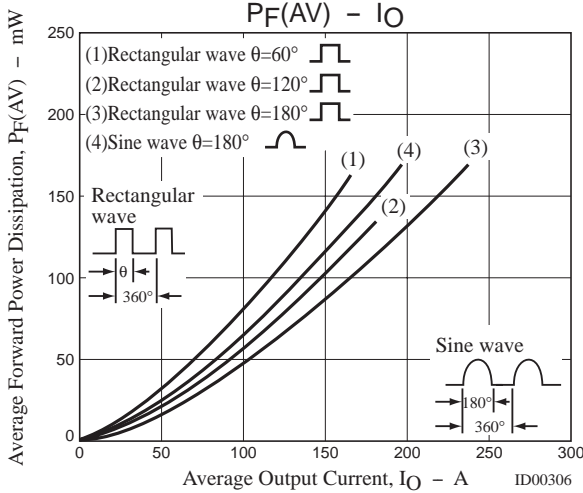
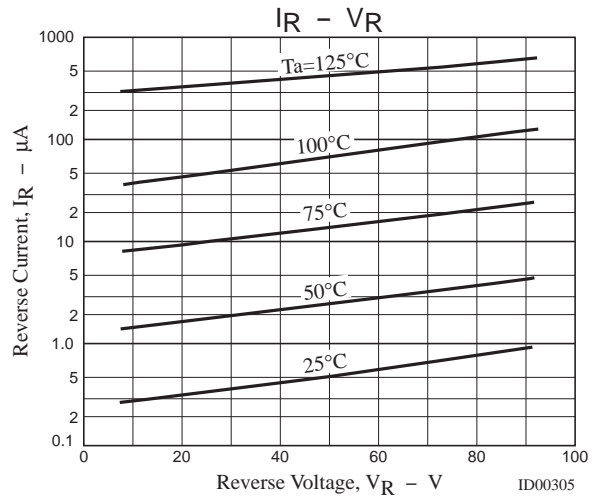
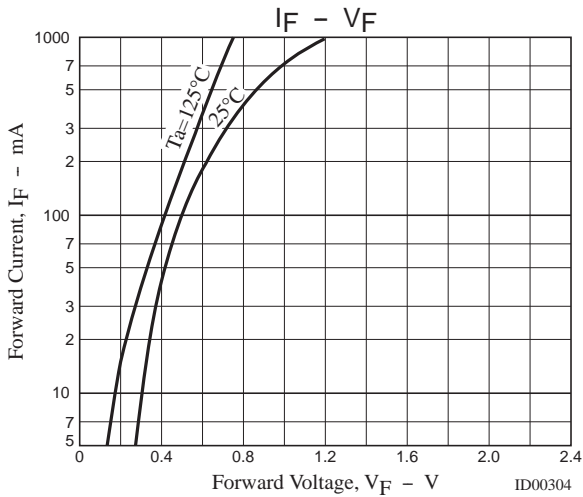
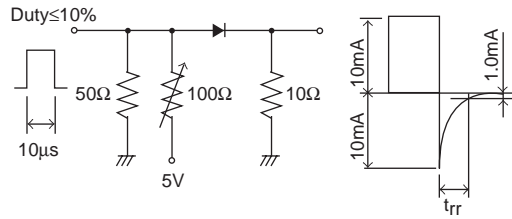
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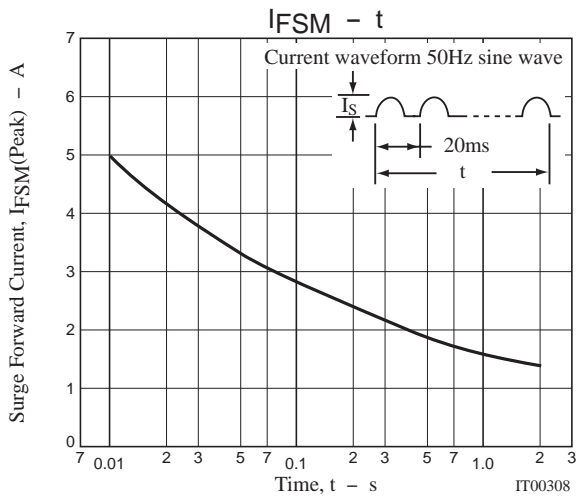
Package Dimensions

unit : mm
7013A-004



t_{rr} Test Circuit





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