



SB05-05CP

Shottky Barrier Diode

50V, 500mA Rectifier

Applications

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

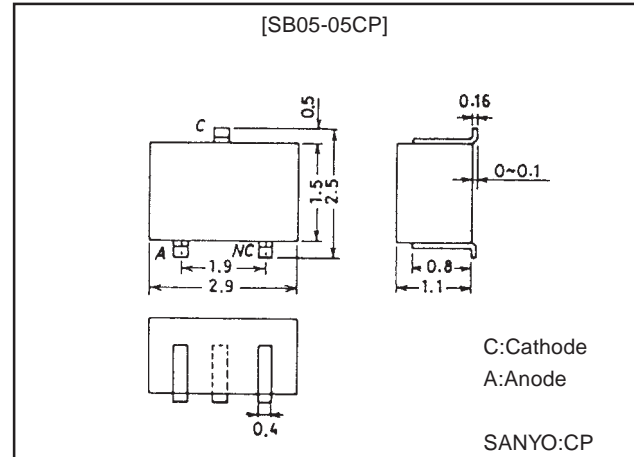
Features

- Low forward voltage (V_F max=0.55V).
- Fast reverse recovery time (t_{rr} max=10ns).
- Low switching noise.
- Low leakage current and high reliability due to highly reliable planar structure.

Package Dimensions

unit:mm

1148



Specifications

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

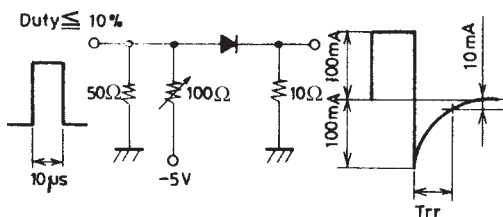
| Parameter | Symbol | Conditions | Ratings | Unit |
|------------------------------------------|-----------|------------------------|-------------|------------------|
| Repetitive Peak Reverse Voltage | V_{RRM} | | -50 | V |
| Nonrepetitive Peak Reverse Surge Voltage | V_{RSM} | | -55 | V |
| Average Output Current | I_O | | 500 | mA |
| Surge Forward Current | I_{FSM} | 50Hz sine wave, 1cycle | 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 $T_a = 25^\circ\text{C}$

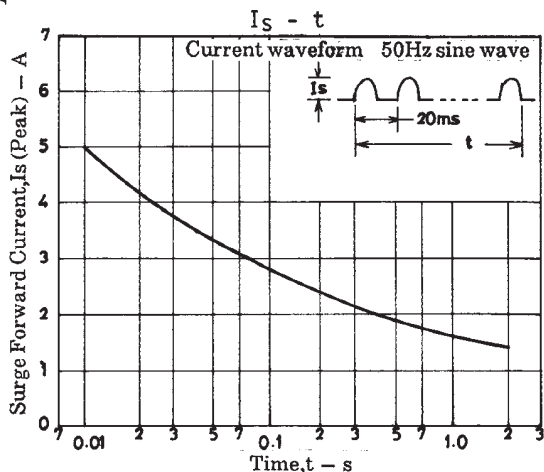
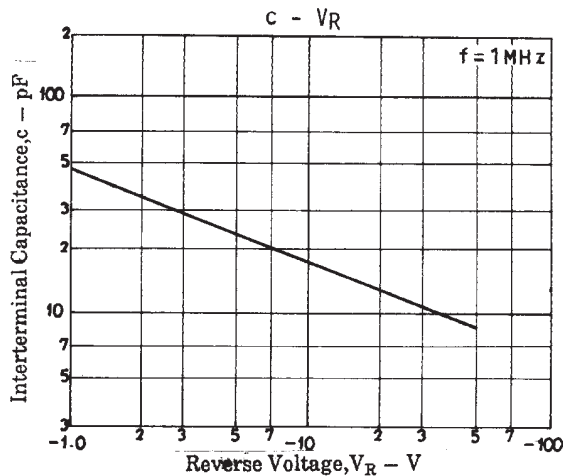
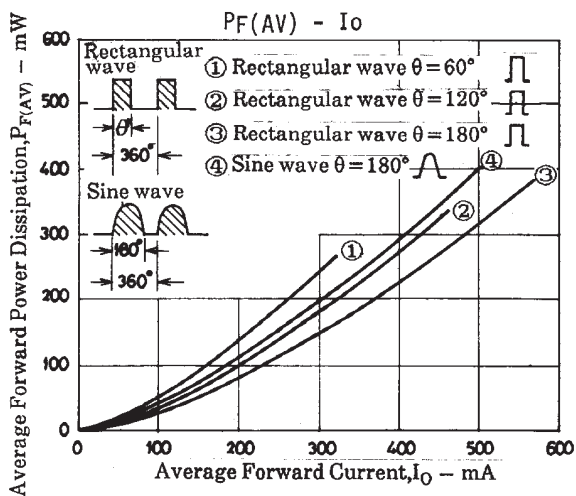
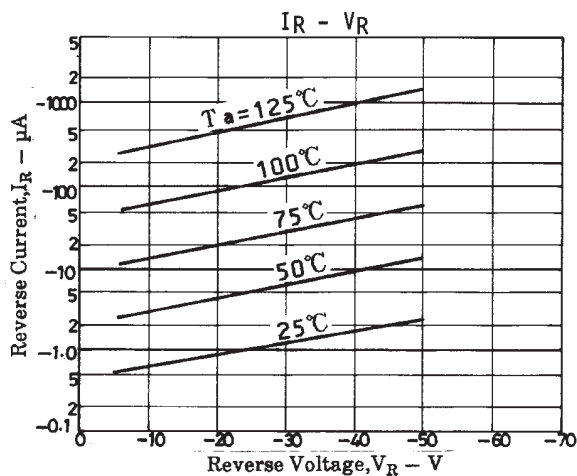
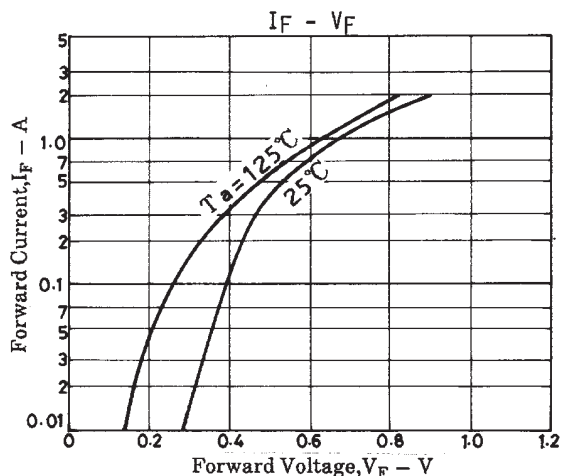
| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---------------------------|-----------|--------------------------------------------------------------------------------------|---------|-----|------|--------------------|
| | | | min | typ | max | |
| Reverse Voltage | V_R | $I_R = -200\mu\text{A}$ | -50 | | | V |
| Forward Voltage | V_F | $I_F = -500\text{mA}$ | | | 0.55 | V |
| Reverse Current | I_R | $V_R = -25\text{V}$ | | | -50 | μA |
| Interterminal Capacitance | C | $V_R = -10\text{V}$, $f = 1\text{MHz}$ | | 17 | | pF |
| Reverse Recovery Time | t_{rr} | $I_F = I_R = 100\text{mA}$, See specified Test Circuit | | | 10 | ns |
| Thermal Resistance | Rthj-a(1) | | | 420 | | $^\circ\text{C/W}$ |
| | Rthj-a(2) | Mounted on Cu-foild area of $16\text{mm}^2 \times 0.2\text{mm}$ on glass epoxy board | | 330 | | $^\circ\text{C/W}$ |

· Marking:B

t_{rr} Test Circuit



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