



SB10W05T

Schottky Barrier Diode (Twin Type · Cathode Common)

50V, 1A Rectifier

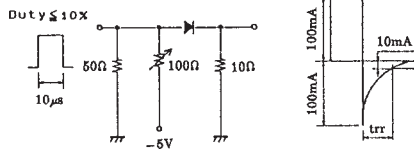
Applications

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

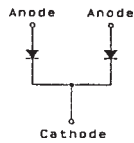
Features

- 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.

t_{rr} Test Circuit



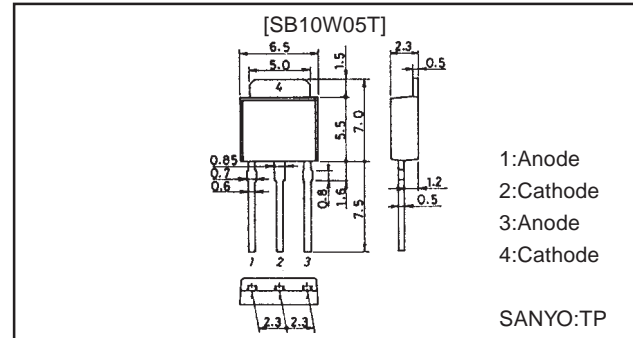
Electrical Connection



Package Dimensions

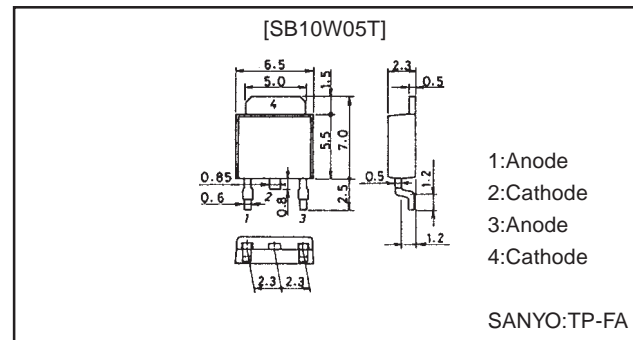
unit:mm

1254A



unit:mm

1257A



Specifications

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$ (Value per element)

| 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 | 50Hz, resistor load, $T_c=120^\circ\text{C}$ | 1 | A |
| | I_O | 50Hz, resistor load, $T_c=116^\circ\text{C}$, Total rating | 2 | 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 $T_a = 25^\circ\text{C}$ (Value per element)

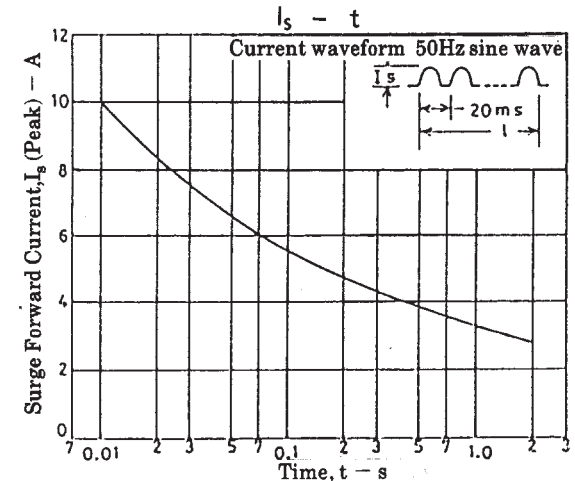
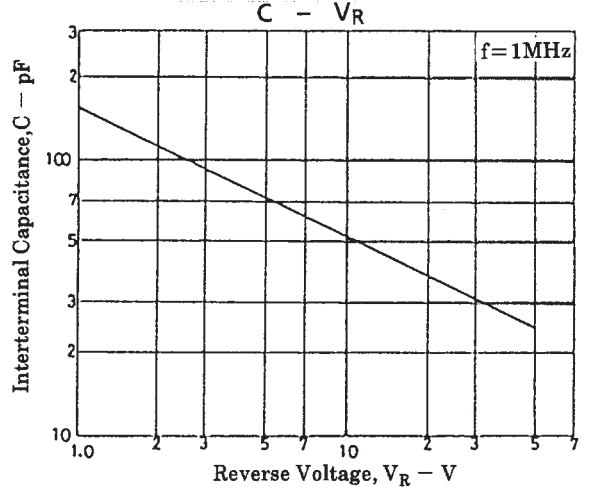
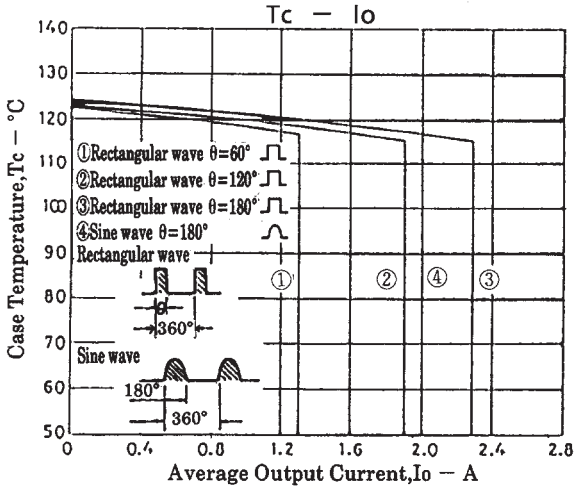
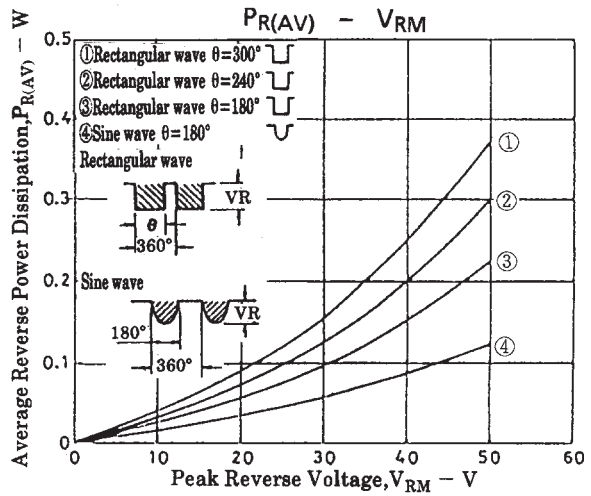
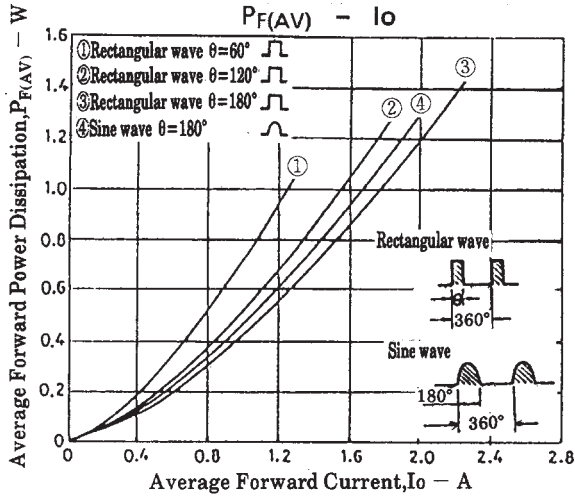
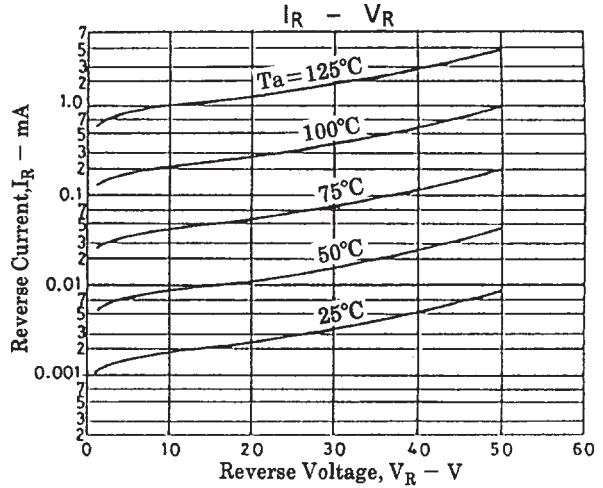
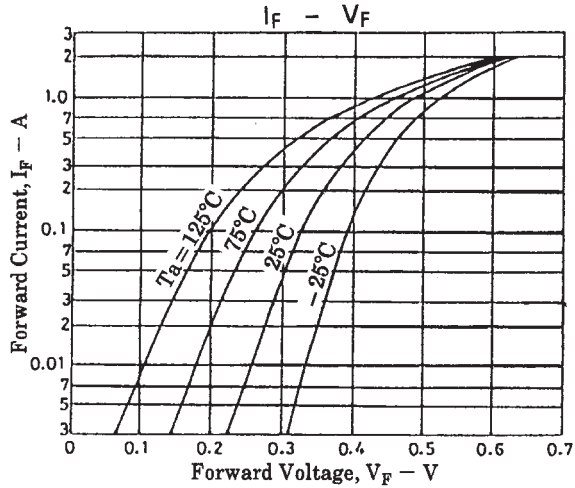
| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---------------------------------------|---------------|--|---------|-----|------|--------------------|
| | | | min | typ | max | |
| Reverse Voltage | V_R | $I_R=300\mu\text{A}$ | 50 | | | V |
| Forward Voltage | V_F | $I_F=1\text{A}$ | | | 0.55 | V |
| Reverse Current | I_R | $V_R=25\text{V}$ | | | 80 | μA |
| Interterminal Capacitance | C | $V_R=10\text{V}$, $f=1\text{MHz}$ | | 52 | | pF |
| Reverse Recovery Time | t_{rr} | $I_F=I_R=100\text{mA}$, See specified Test Circuit. | | | 10 | ns |
| Thermal Resistance (Junction-Ambient) | $R_{th(j-a)}$ | | | 90 | | $^\circ\text{C/W}$ |
| Thermal Resistance (Junction-Case) | $R_{th(j-c)}$ | | | 6 | | $^\circ\text{C/W}$ |

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