

**SANYO****SB40W03T**

Schottky Barrier Diode (Twin Type · Cathode Common)

**30V, 4A Rectifier****Applications**

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

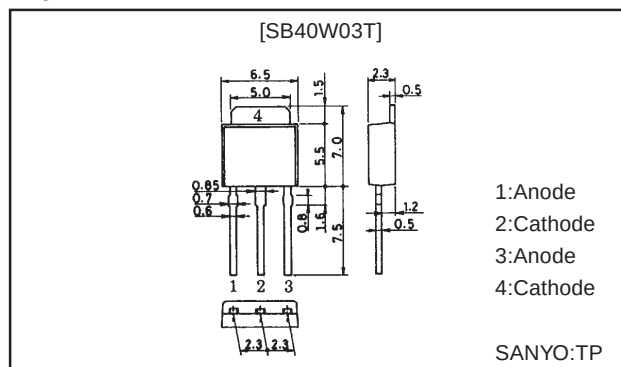
**Features**

- Low forward voltage ( $V_F$  max=0.55V).
- Fast reverse recovery time ( $t_{rr}$  max=30ns).
- Low switching noise.
- Low leakage current and high reliability due to highly reliable planar structure.

**Package Dimensions**

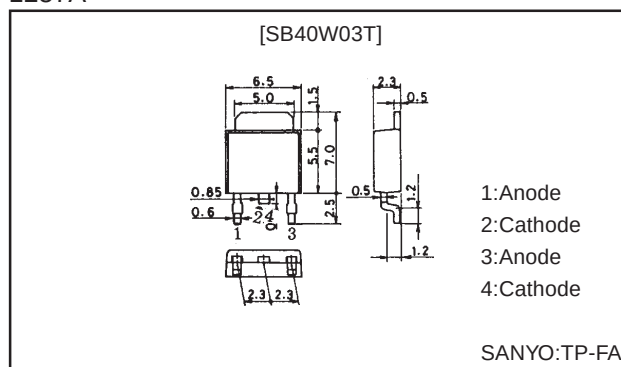
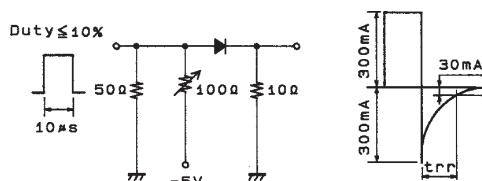
unit:mm

1254A



unit:mm

1257A

 **$t_{rr}$  Test Circuit****Specifications****Absolute Maximum Ratings at  $T_a = 25^\circ\text{C}$  (Value per element)**

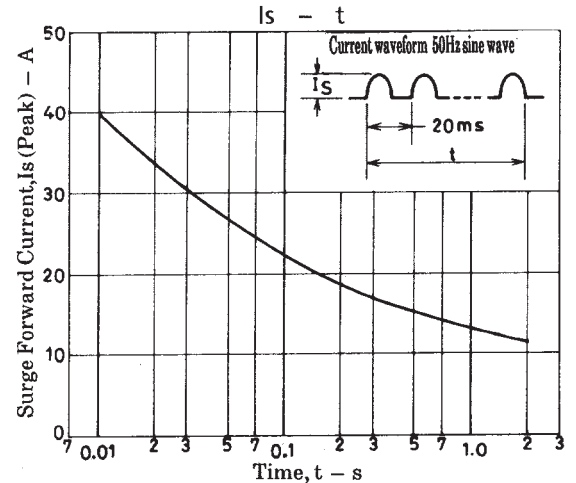
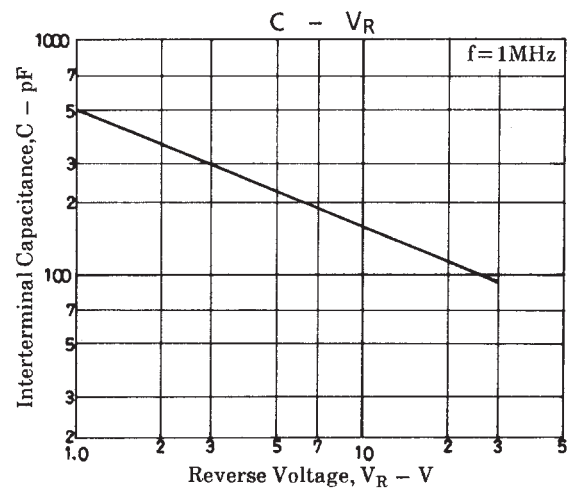
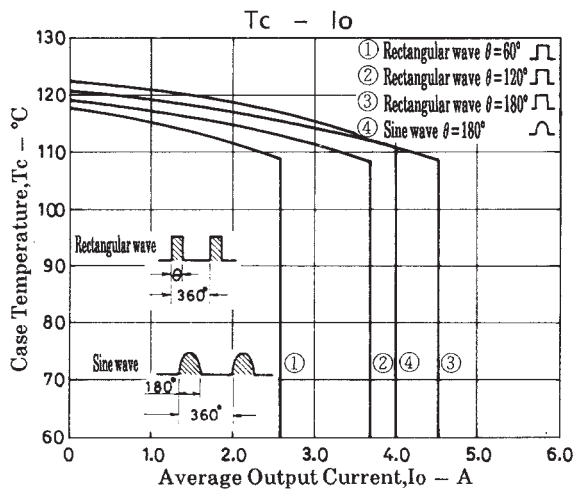
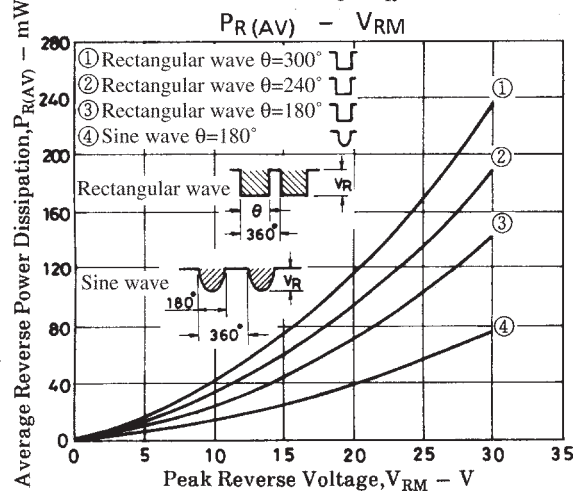
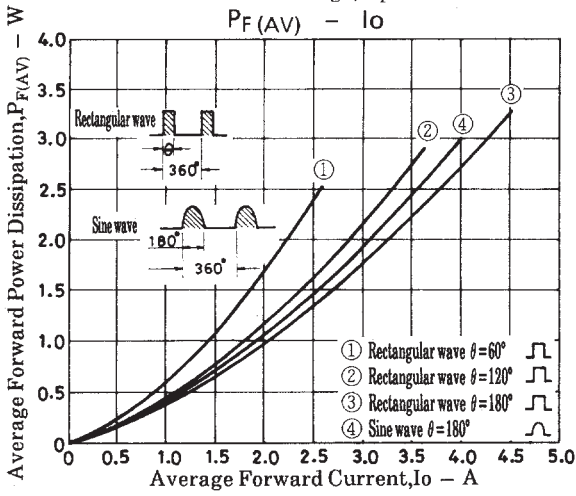
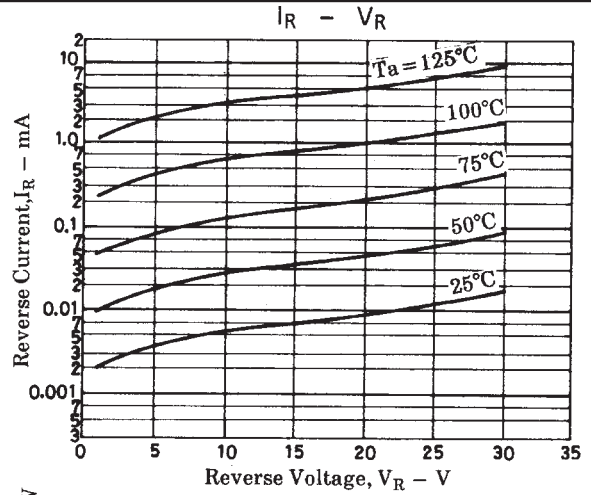
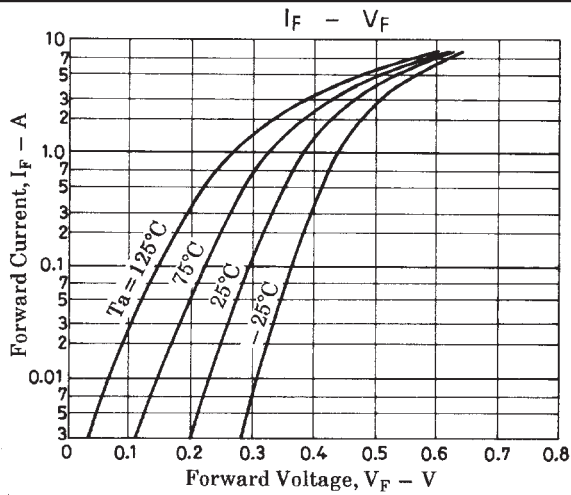
| Parameter                                | Symbol    | Conditions                                                  | Ratings     | Unit             |
|------------------------------------------|-----------|-------------------------------------------------------------|-------------|------------------|
| Repetitive Peak Reverse Voltage          | $V_{RRM}$ |                                                             | 30          | V                |
| Nonrepetitive Peak Reverse Surge Voltage | $V_{RSM}$ |                                                             | 35          | V                |
| Average Output Current                   | $I_O$     | 50Hz, resistive load, $T_c=111^\circ\text{C}$               | 4           | A                |
|                                          | $I_O$     | 50Hz, resistive load, $T_c=92^\circ\text{C}$ , Total rating | 8           | A                |
| Surge Forward Current                    | $I_{FSM}$ | 50Hz sine wave, 1 cycle                                     | 40          | 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                       | $V_R$         | $I_R=1\text{mA}$                                     | 30      |     |      | V                  |
| Forward Voltage                       | $V_F(1)$      | $I_F=4\text{A}$                                      |         |     | 0.55 | V                  |
|                                       | $V_F(2)$      | $I_F=1\text{A}$                                      |         |     | 0.45 | V                  |
| Reverse Current                       | $I_R$         | $V_R=15\text{V}$                                     |         |     | 200  | $\mu\text{A}$      |
| Interterminal Capacitance             | $C$           | $V_R=10\text{V}$ , $f=1\text{MHz}$                   |         | 160 |      | pF                 |
| Reverse Recovery Time                 | $t_{rr}$      | $I_F=I_R=300\text{mA}$ , See specified Test Circuit. |         |     | 30   | ns                 |
| Thermal Resistance (Junction-Ambient) | $R_{th(j-a)}$ |                                                      |         | 90  |      | $^\circ\text{C/W}$ |
| Thermal Resistance (Junction-Case)    | $R_{th(j-c)}$ |                                                      |         | 5   |      | $^\circ\text{C/W}$ |

**SANYO Electric Co.,Ltd. Semiconductor Business Headquarters**

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN



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