



# SB40W03T

Schottky Barrier Diode (Twin Type · Cathode Common)

## 30V, 4A Rectifier

### Applications

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

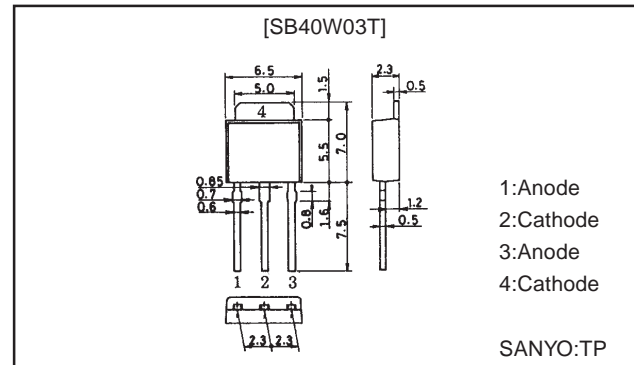
### Features

- 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

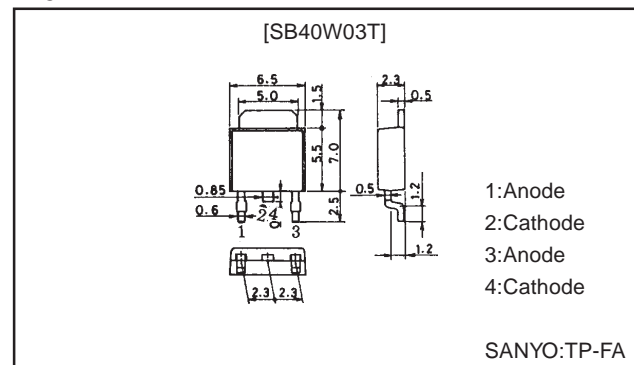
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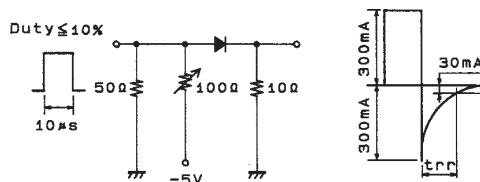


unit:mm

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	$^\circ\text{C}$

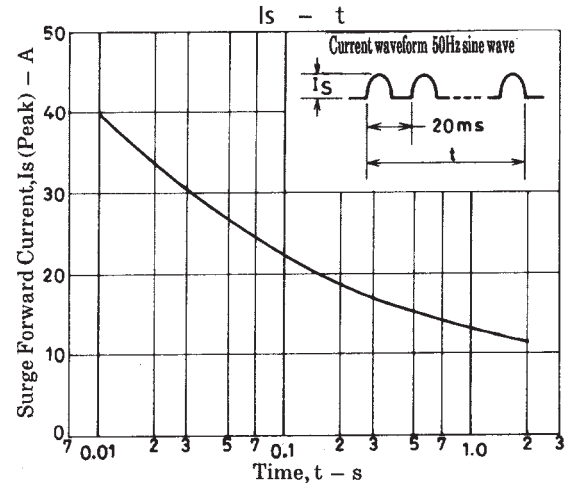
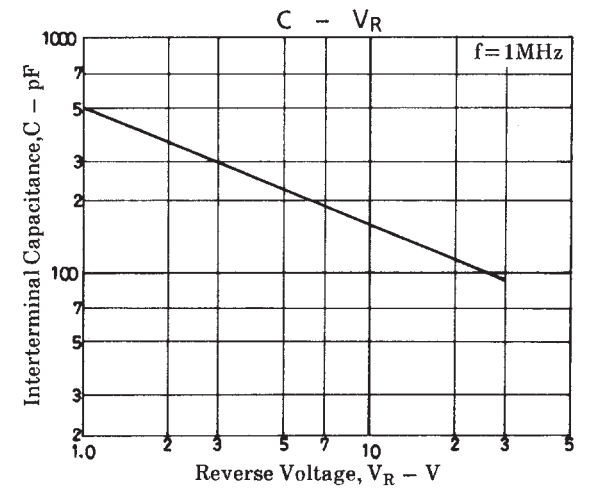
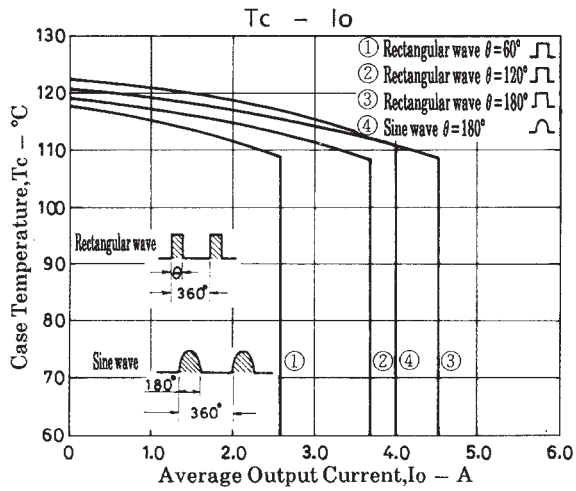
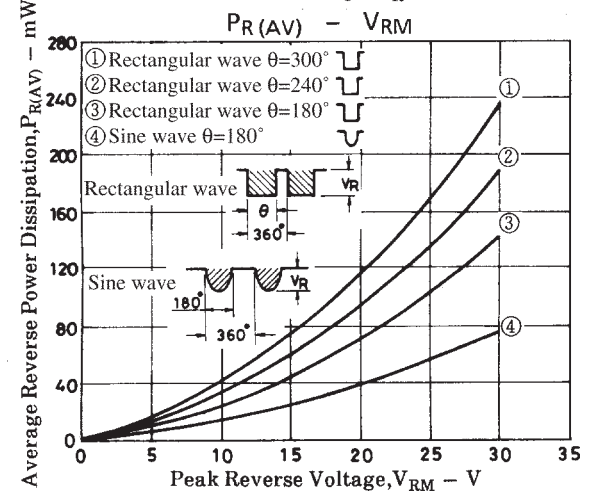
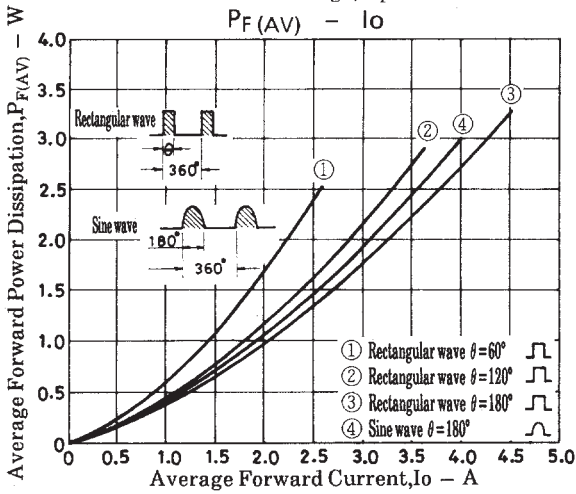
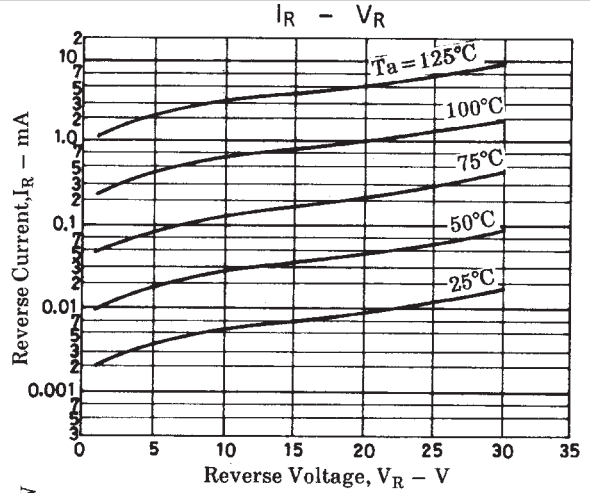
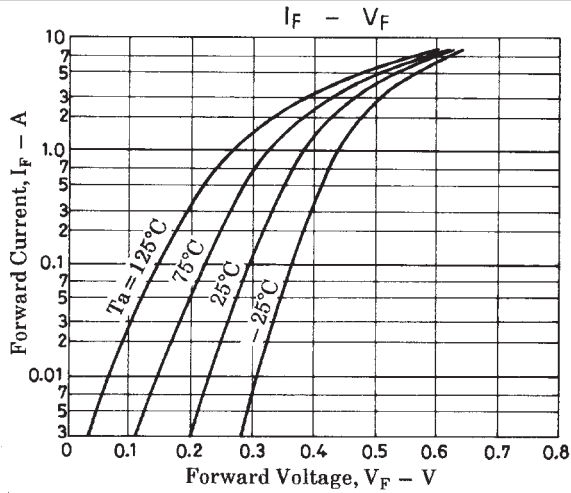
#### Electrical Characteristics at $T_a = 25^\circ\text{C}$ (Value per element)

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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