



# SB120-05R

Schottky Barrier Diode (Twin Type · Cathode Common)

## 50V, 12A Rectifier

### Applications

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

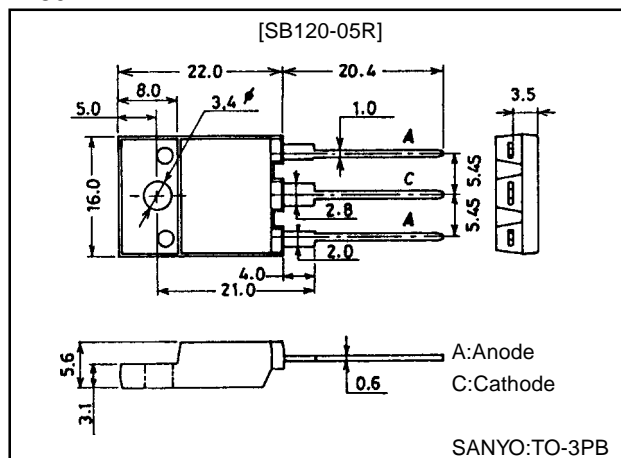
### Features

- Low forward voltage ( $V_F$  max=0.55V).
- Fast reverse recovery time ( $t_{rr}$  max=70ns).
- Low switching noise.
- Low leakage current and high reliability due to highly reliable planar structure.
- Micaless package facilitating easy mounting.

### Package Dimensions

unit:mm

1180



### Specifications

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

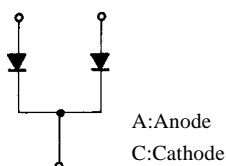
Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$		-50	V
Non-repetitive Peak Reverse Surge Voltage	$V_{RSM}$		-55	V
Average Output Current	$I_O$	50Hz, resistive load, $T_c=104^\circ\text{C}$	12	A
Surge Forward Current	$I_{FSM}$	50Hz sine wave, 1 cycle	120	A
Junction Temperature	$T_j$		-55 to +125	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +125	$^\circ\text{C}$

#### Electrical Characteristics

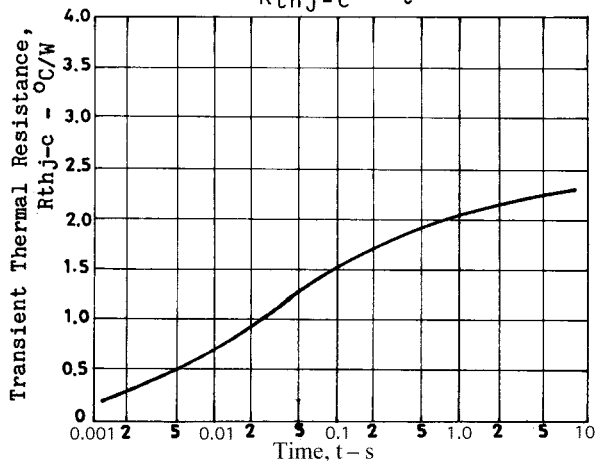
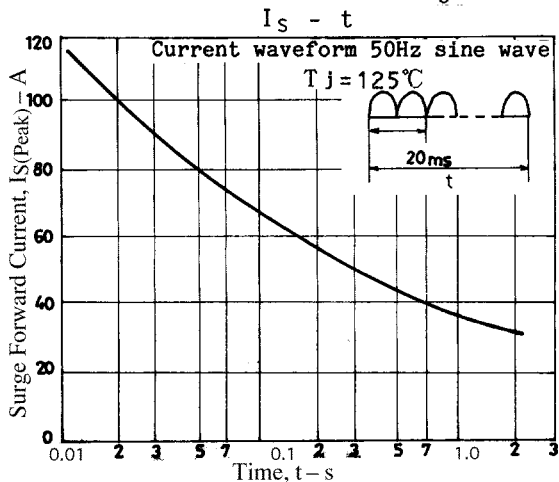
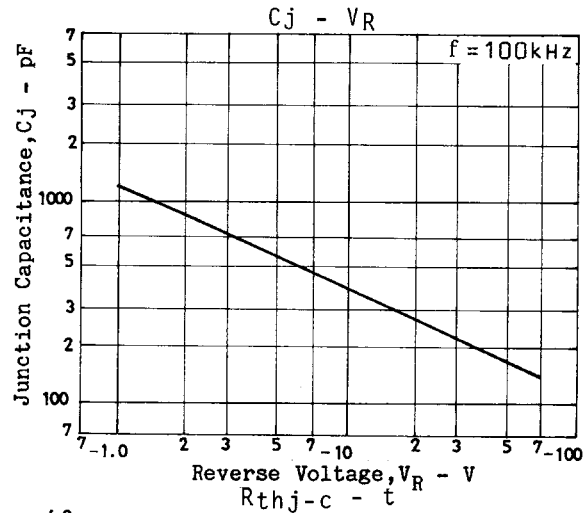
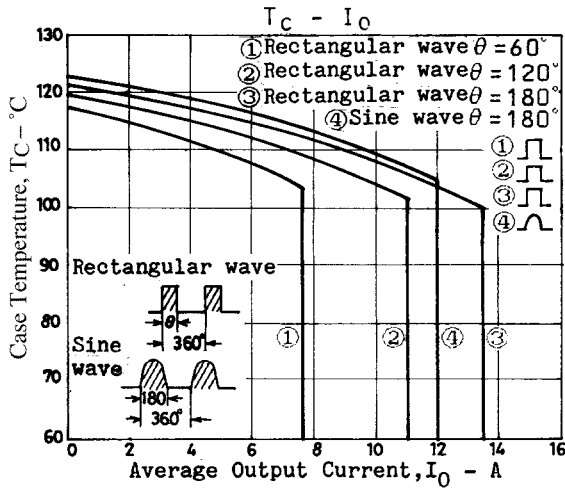
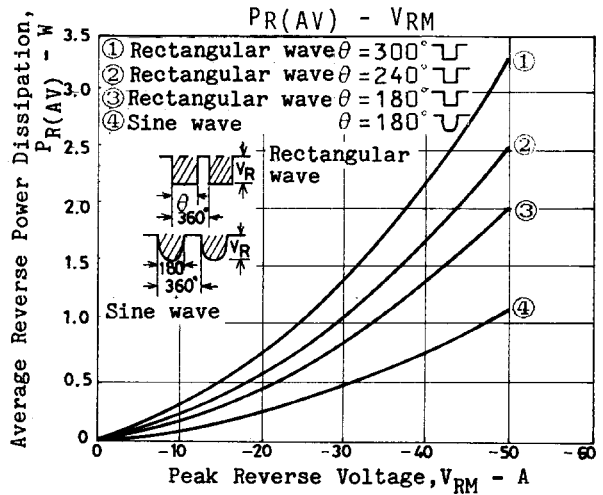
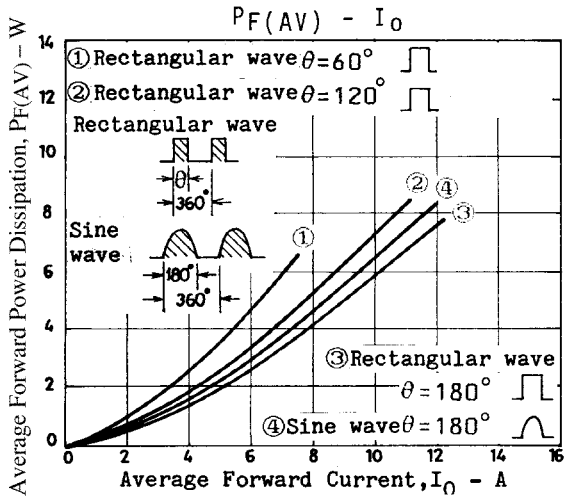
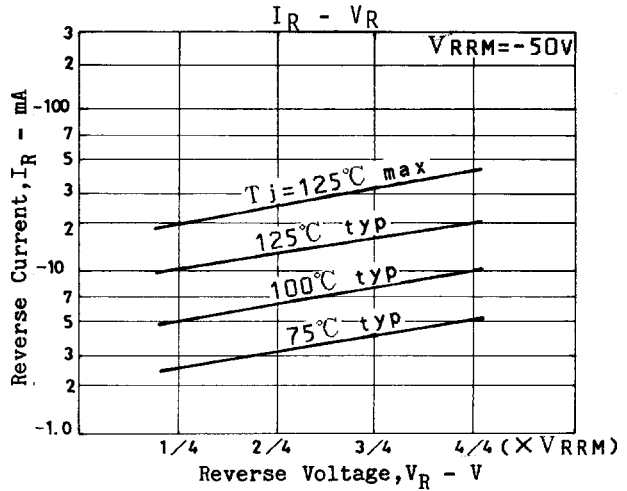
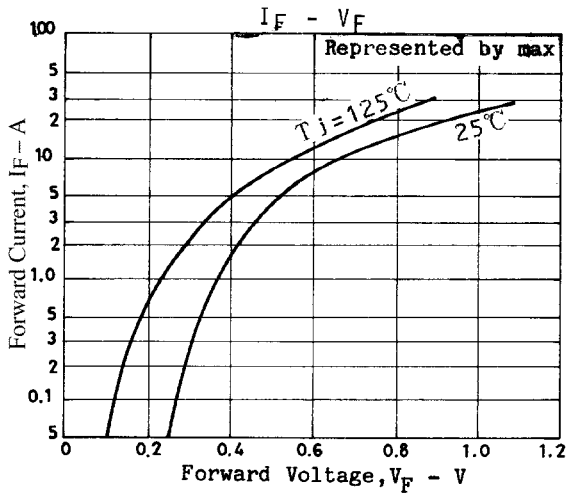
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	$V_R$	$I_R=-3\text{mA}$ , $T_j=25^\circ\text{C}^*$	-50			V
Forward Voltage	$V_F$	$I_F=6\text{A}$ , $T_j=25^\circ\text{C}^*$			0.55	V
Reverse Current	$I_R$	$V_R=-25\text{V}$ , $T_j=25^\circ\text{C}^*$			-0.6	mA
Reverse Recovery Time	$t_{rr}$	$I_F=2\text{A}$ , $T_j=25^\circ\text{C}^*$ , $-dI_F/dt=10\text{A}/\mu\text{s}$			70	ns
Thermal Resistance	$R_{th-j-c}$	Junction-Case:Smoothed DC			2.2	$^\circ\text{C}/\text{W}$

Note)\*: Value per element

#### Electrical Connection



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