

# SHINDENGEN

## General Purpose Rectifiers

SIL Bridges

# D20XB60

## 600V 20A

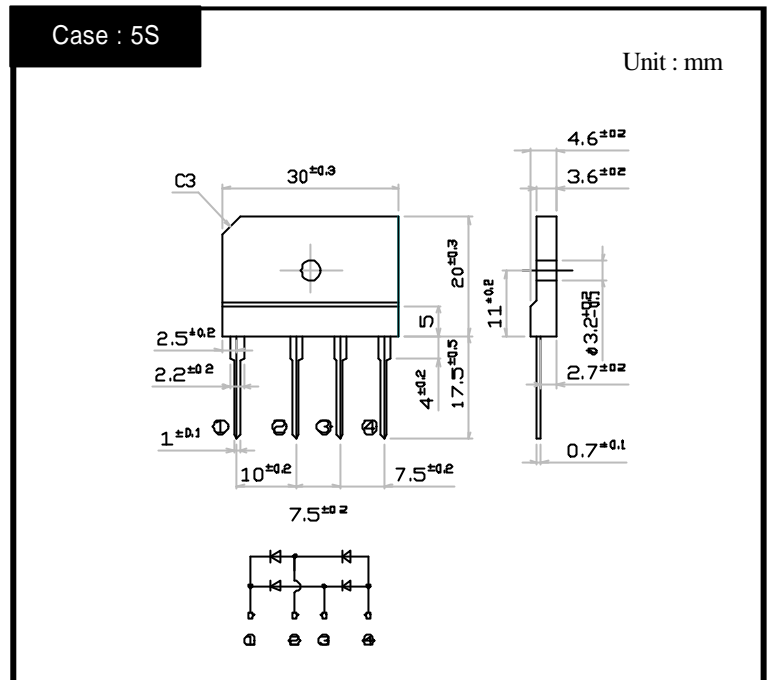
### FEATURES

- Thin Single In-Line Package
- High current capacity with Small Package
- High IFSM
- Superior Thermal Conductivity

### APPLICATION

- Switching power supply
- Home Appliances, Office Equipment
- Factory Automation, Inverter

### OUTLINE DIMENSIONS



### RATINGS

Absolute Maximum Ratings (If not specified  $T_c=25$  )

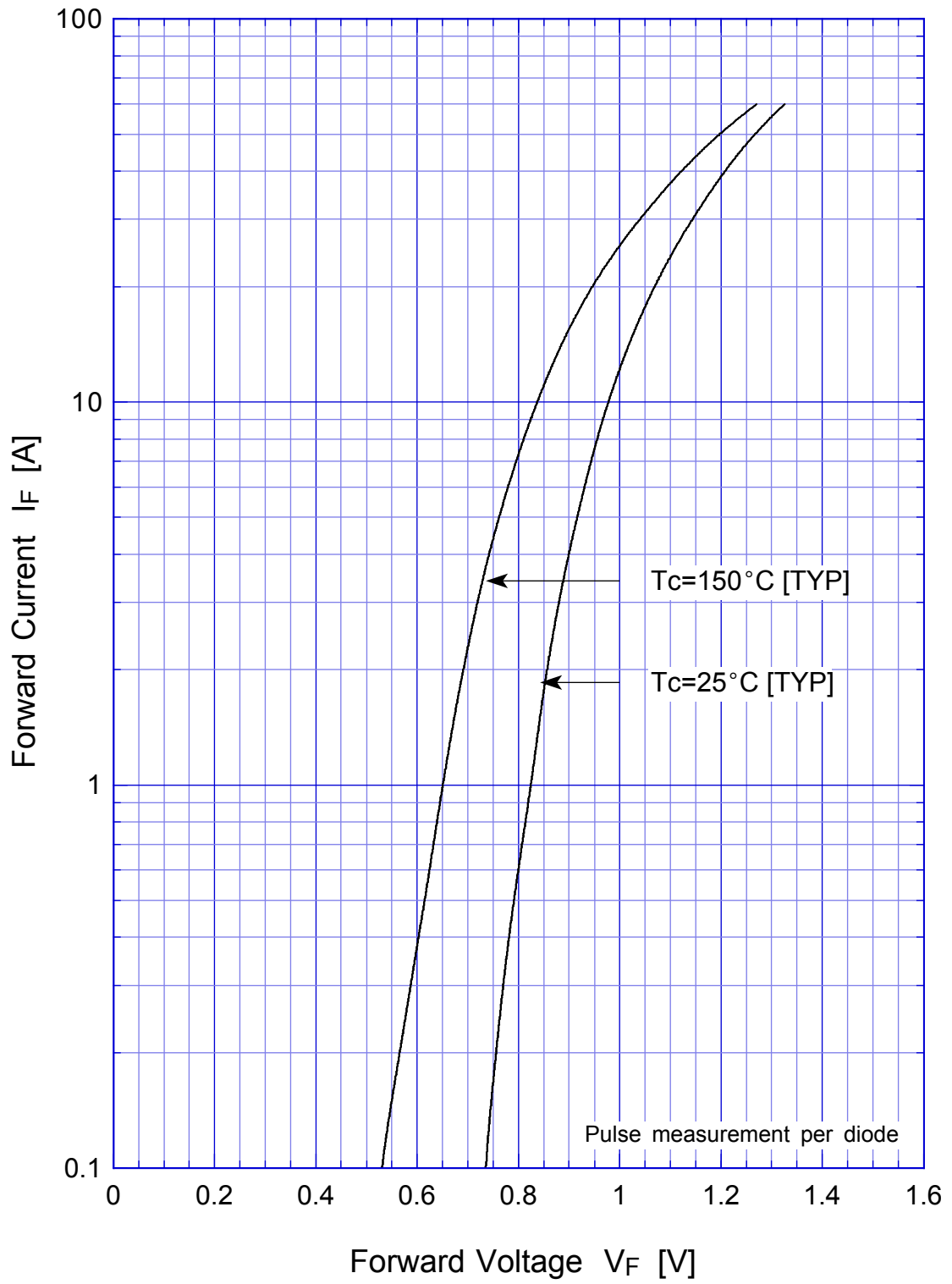
| Item                              | Symbol    | Conditions   | Ratings   | Unit        |
|-----------------------------------|-----------|--|-----------|-------------|
| Storage Temperature               | $T_{stg}$ |  | -40 ~ 150 |             |
| Operating Junction Temperature    | $T_j$     |  | 150       |             |
| Maximum Reverse Voltage           | $V_{RM}$  |  | 600       | V           |
| Average Rectified Forward Current | $I_O$     | 50Hz sine wave, R-load With heatsink $T_c=87$              | 20        | A           |
|                                   |           | 50Hz sine wave, R-load Without heatsink $T_a=25$           | 3.5       |             |
| Peak Surge Forward Current        | $I_{FSM}$ | 50Hz sine wave, Non-repetitive 1cycle peak value, $T_j=25$ | 240       | A           |
| Current Squared Time              | $I^2t$    | 1ms $t < 10ms$ $T_j=25$                                    | 200       | $A^2s$      |
| Dielectric Strength               | $V_{dis}$ | Terminals to case, AC 1 minute                             | 2.5       | kV          |
| Mounting Torque                   | TOR       | (Recommended torque $0.5N \cdot m$ )                       | 0.8       | $N \cdot m$ |

Electrical Characteristics (If not specified  $T_c=25$  )

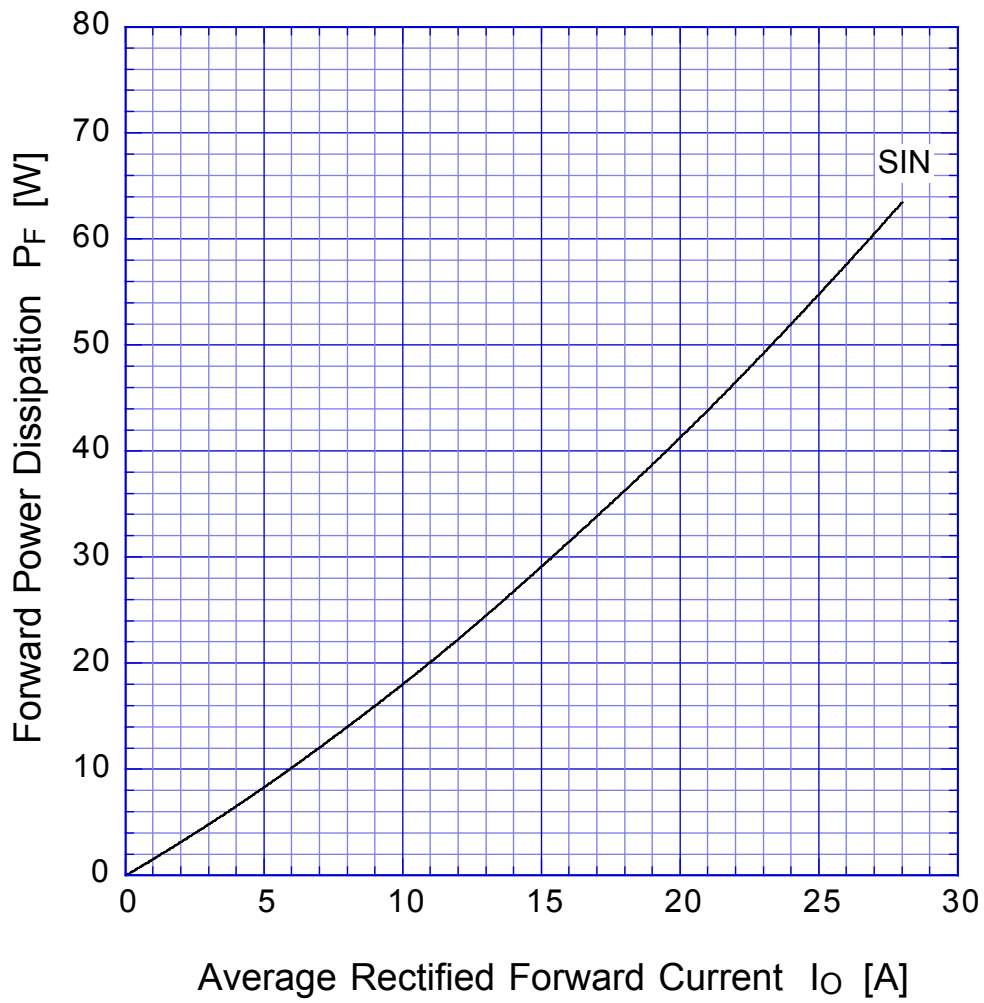
| Item               | Symbol        | Conditions  | Ratings | Unit    |
|--------------------|---------------|---|---------|---------|
| Forward Voltage    | $V_F$         | $I_F=10A$ , Pulse measurement, Rating of per diode    | Max.1.1 | V       |
| Reverse Current    | $I_R$         | $V_R=V_{RM}$ , Pulse measurement, Rating of per diode | Max.10  | $\mu A$ |
| Thermal Resistance | $\theta_{jc}$ | junction to case With heatsink                        | Max.1.5 | /W      |
|                    | $\theta_{jl}$ | junction to lead Without heatsink                     | Max.5   |         |
|                    | $\theta_{ja}$ | junction to ambient Without heatsink                  | Max.22  |         |

D20XBx

Forward Voltage



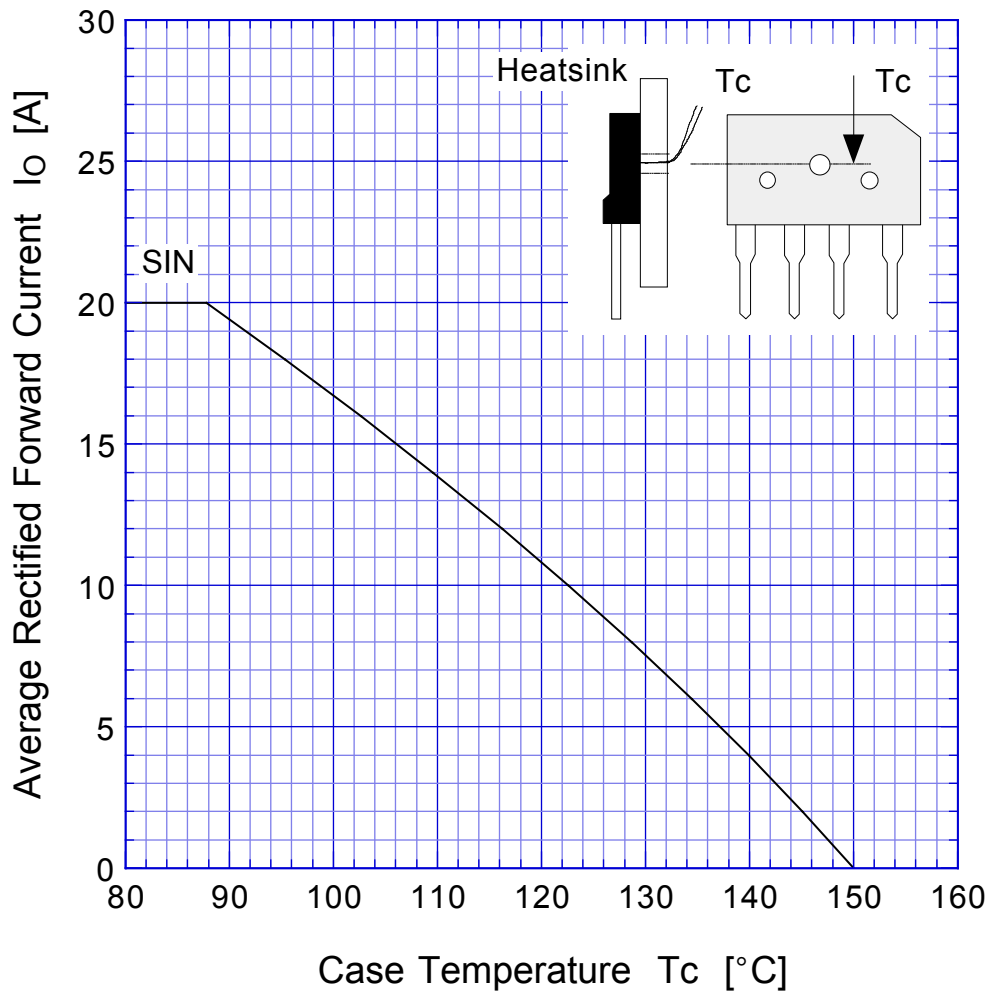
## D20XBx Forward Power Dissipation



$T_j = 150^\circ\text{C}$   
Sine wave

# D20XBx

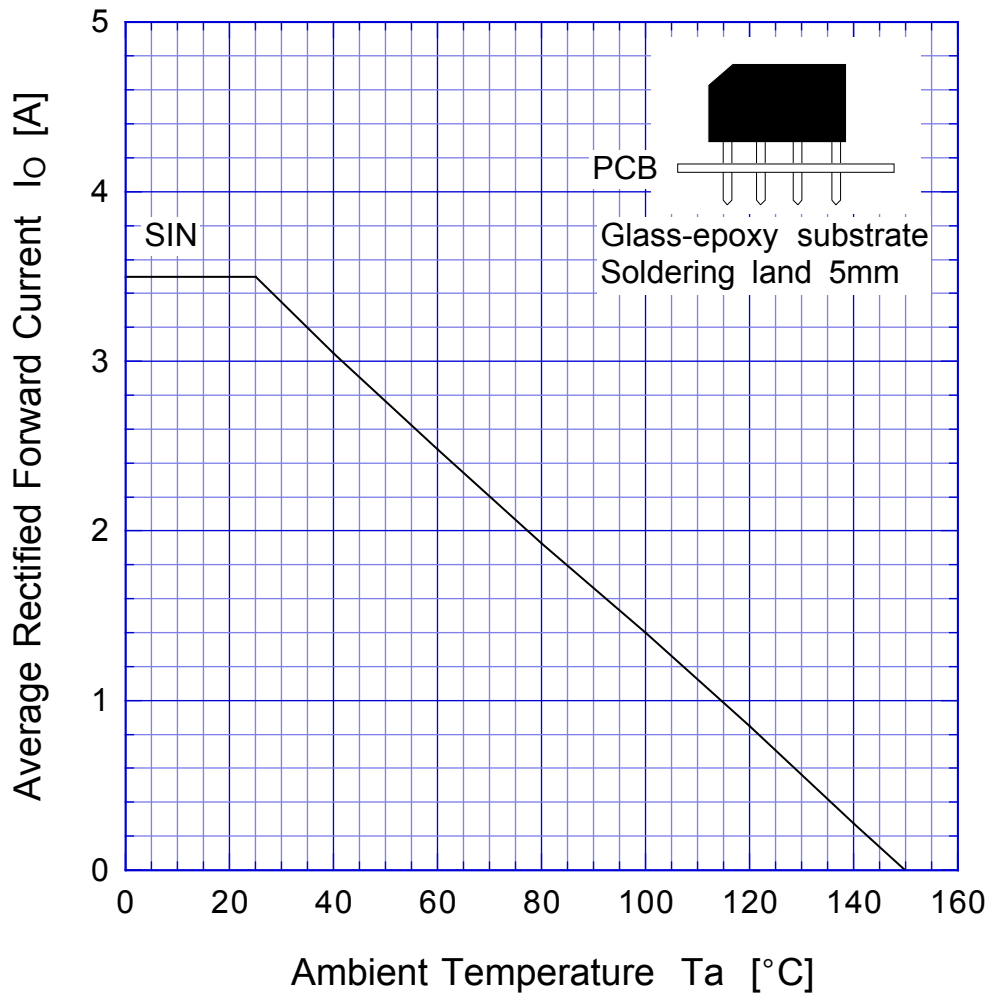
# Derating Curve



Sine wave  
R-load  
with heatsink

# D20XBx

# Derating Curve



Sine wave  
R-load  
Free in air

# D20XBx

## Peak Surge Forward Capability

