# SHINDENGEN

## General Purpose Rectifiers

**SMT Bridges**

# S1ZB60

## 600V 0.8A

### FEATURES

- Small SMT package
- High reliability with superior moisture resistance
- Applicable to Automatic Insertion

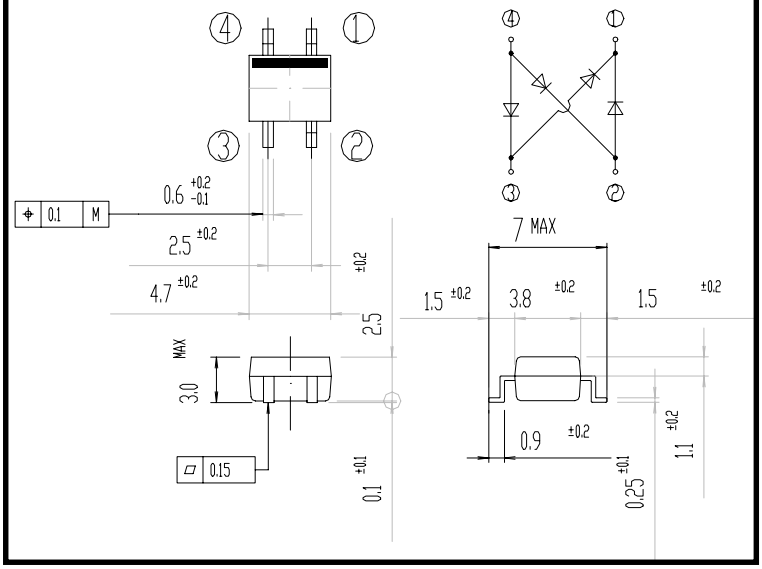
### APPLICATION

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

### OUTLINE DIMENSIONS

Case : 1Z

Unit : mm



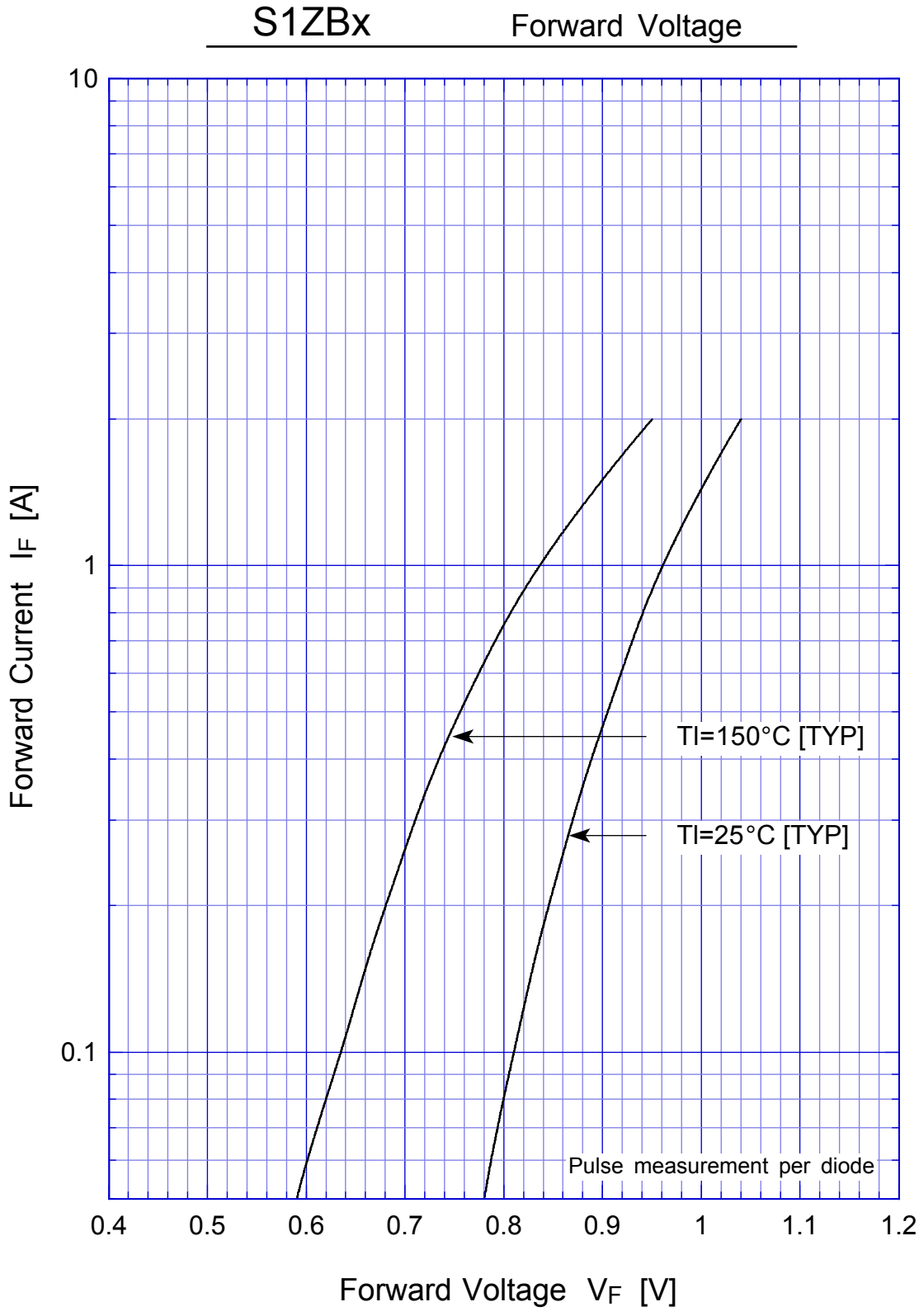

## RATINGS

●Absolute Maximum Ratings (If not specified Tl=25℃)

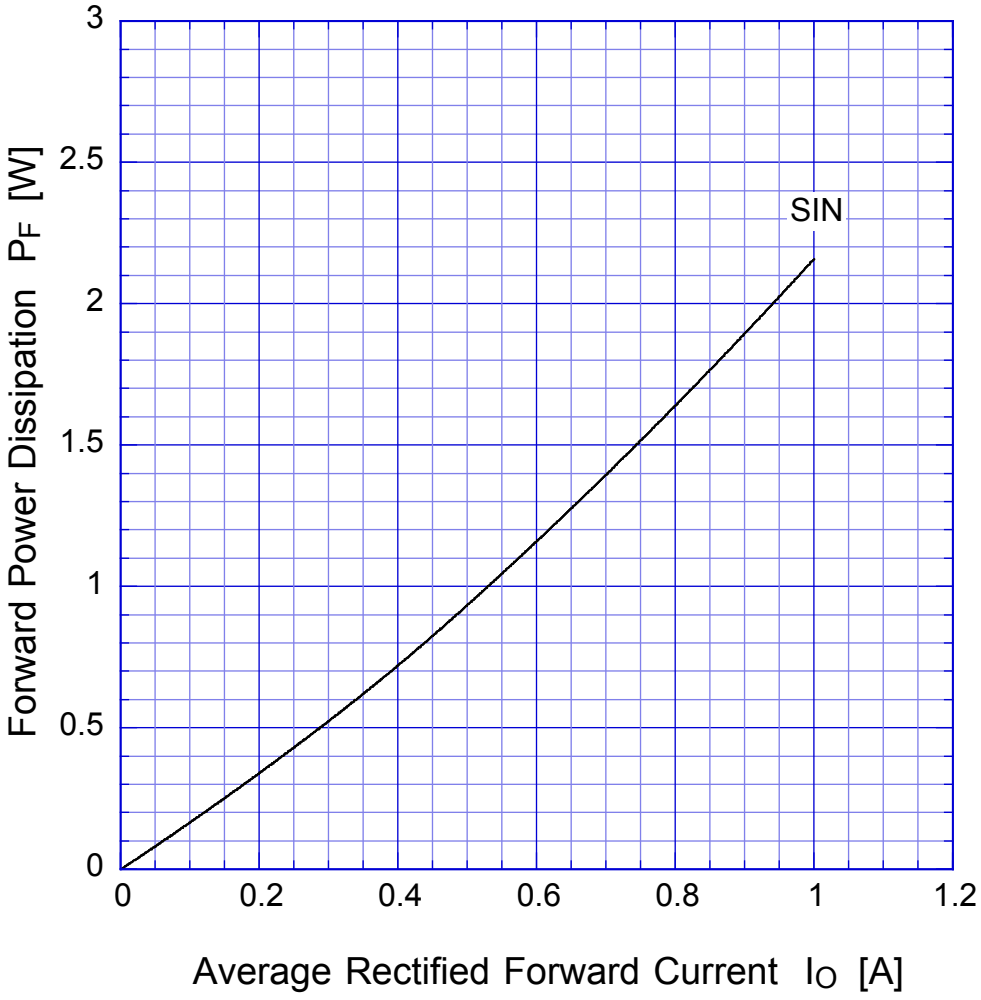
| Item | Symbol | Conditions | Ratings | Unit |
|---|---|---|---|---|
| Storage Temperature | Tstg | | -40～150 | ℃ |
| Operating Junction Temperature | Tj | | 150 | ℃ |
| Maximum Reverse Voltage | $V_{RM}$ | | 600 | V |
| Average Rectified Forward Current | Io | 50Hz sine wave, R-load On alumina substrate Ta=25℃ | 0.8 | A |
| | | 50Hz sine wave, R-load On glass-epoxy substrate Ta=25℃ | 0.5 | |
| Peak Surge Forward Current | $I_{FSM}$ | 50Hz sine wave, Non-repetitive 1 cycle peak value, Tj=25℃ | 30 | A |
| Current Squared Time | $I^2t$ | 1ms≦t＜10ms Tj=25℃ | 4.5 | $A^2s$ |

●Electrical Characteristics (If not specified Tl=25℃)

| Item | Symbol | Conditions | Ratings | Unit |
|---|---|---|---|---|
| Forward Voltage | $V_F$ | $I_F$=0.4A, Pulse measurement, Rating of per diode | Max.1.05 | V |
| Reverse Current | $I_R$ | $V_R$=$V_{RM}$, Pulse measurement, Rating of per diode | Max.10 | μA |
| Thermal Resistance | θ jl | junction to lead | Max.20 | ℃/W |
| | θ ja | junction to ambient On alumina substrate | Max.76 | |
| | | junction to ambient On glass-epoxy substrate | Max.134 | |

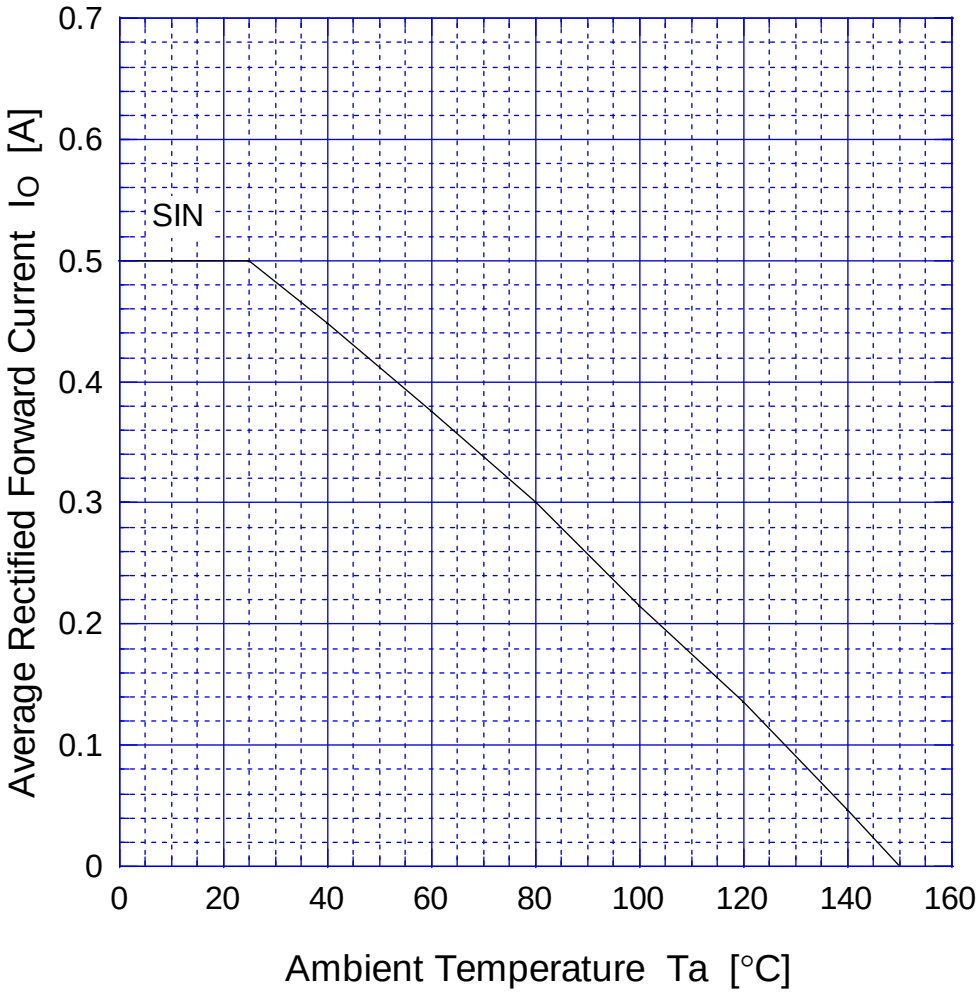

S1ZBx
Forward Voltage
10
1
0.1
Forward Current IF [A]
Tl=150°C [TYP]
Tl=25°C [TYP]
Pulse measurement per diode
0.4
0.5
0.6
0.7
0.8
0.9
1
1.1
1.2
Forward Voltage VF [V]

## S1ZBx Forward Power Dissipation



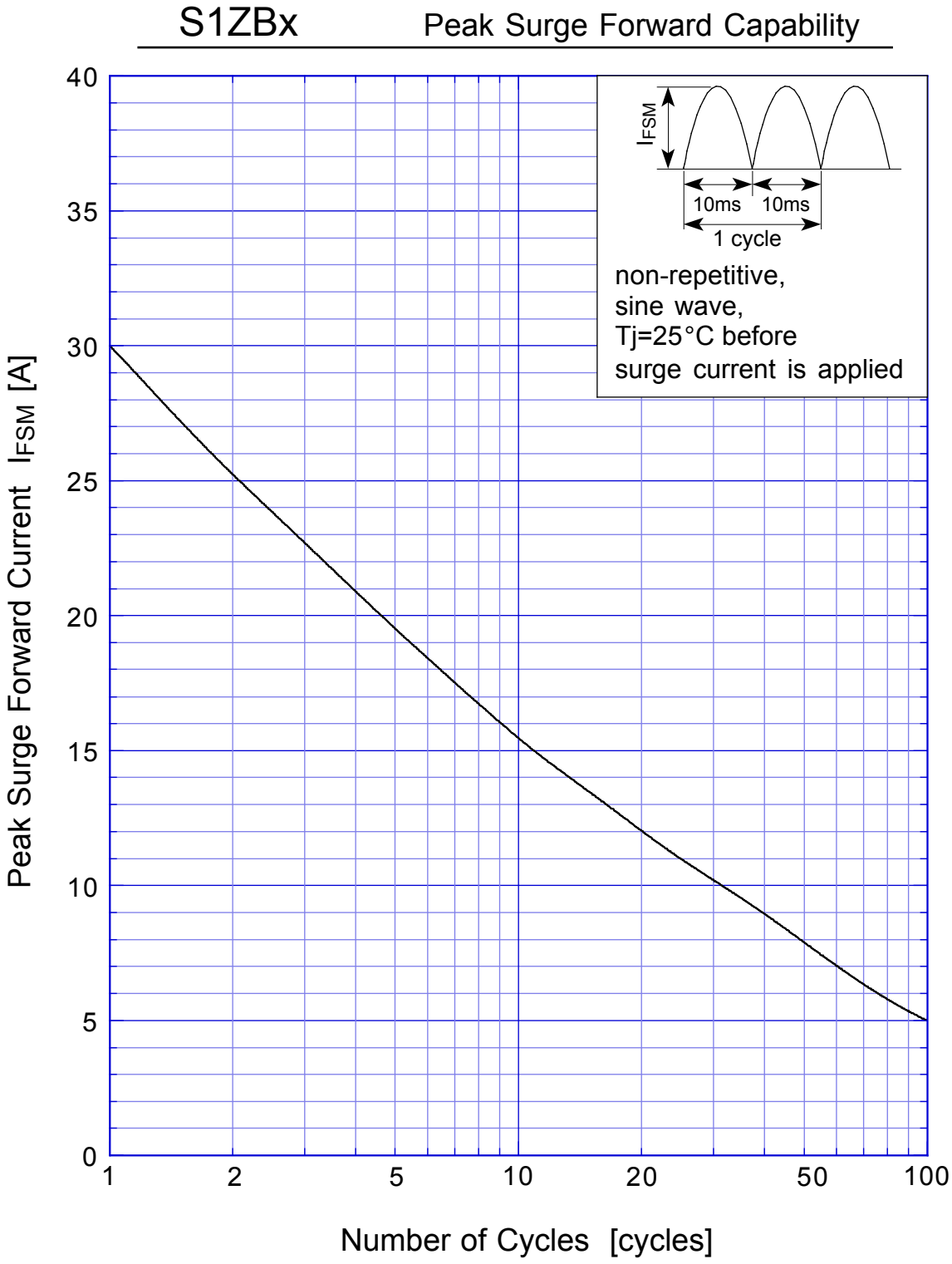

Tj = 150°C
Sine wave

## S1ZBx Derating Curve




Sine wave
R-load
Free in air

| | Glass-epoxy | Alumina |
|---|---|---|
| Soldering land | 1mm×1mm | 1mm×1mm |
| Conductor layer | 35μm | 20μm |
| Substrate thickness | | 0.64mm |


S1ZBx
Peak Surge Forward Capability
40
35
30
25
20
15
10
5
0
1
2
5
10
20
50
100
Peak Surge Forward Current IFSM [A]
Number of Cycles [cycles]
IFSM
10ms
10ms
1 cycle
non-repetitive,
sine wave,
Tj=25°C before
surge current is applied