ShinDengen

# S2K100

## Fast Recovery Diodes
## 1000V, 2A

### Feature

- High Voltage
- Low Noise
- Pb free terminal
- RoHS:Yes

### OUTLINE

**Package (House Name):** AX10

### Equivalent circuit


### Absolute Maximum Ratings (unless otherwise specified : Tl=25℃)

| Item | Symbol | Conditions | Ratings | Unit |
|---|---|---|---|---|
| Storage temperrature | Tstg | | -55 to 150 | ℃ |
| Junction temperature | Tj | | -55 to 150 | ℃ |
| Repetitive peak reverse voltage | $V_{RRM}$ | | 1000 | V |
| Average forward current | $I_F$(AV) | 50Hz sine wave, Resistance load, On glass-epoxy substrate, Tl=91℃ ※ | 2 | A |
| Average forward current | $I_F$(AV) | 50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25℃ ※ | 0.9 | A |
| Surge forward current | $I_{FSM}$ | 50Hz sine wave, Non-repetitive 1 cycle, Peak value, Tj=25℃ | 65 | A |
| Surge forward current | $I_{FSM1}$ | tp=1ms, Sine wave, Non-repetitive, Peak value, Tj=25℃ | 100 | A |

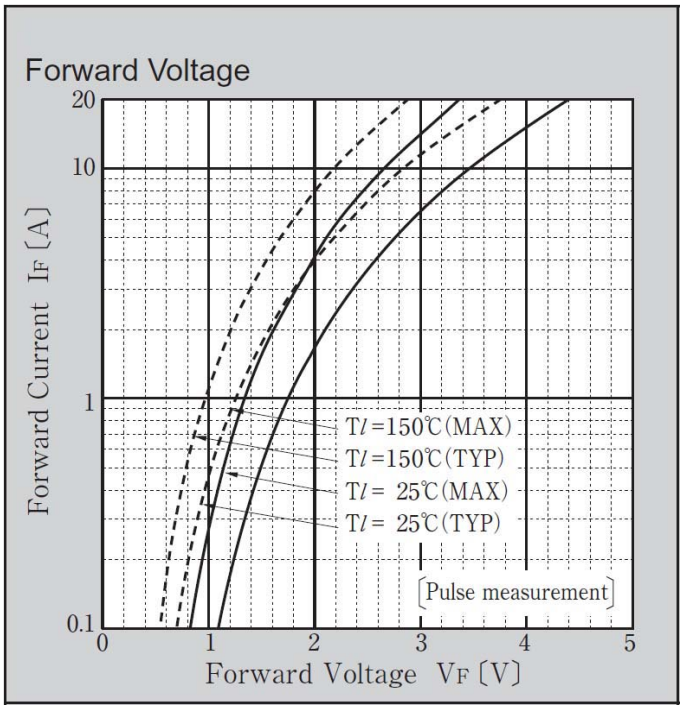
※ :See the original Specifications

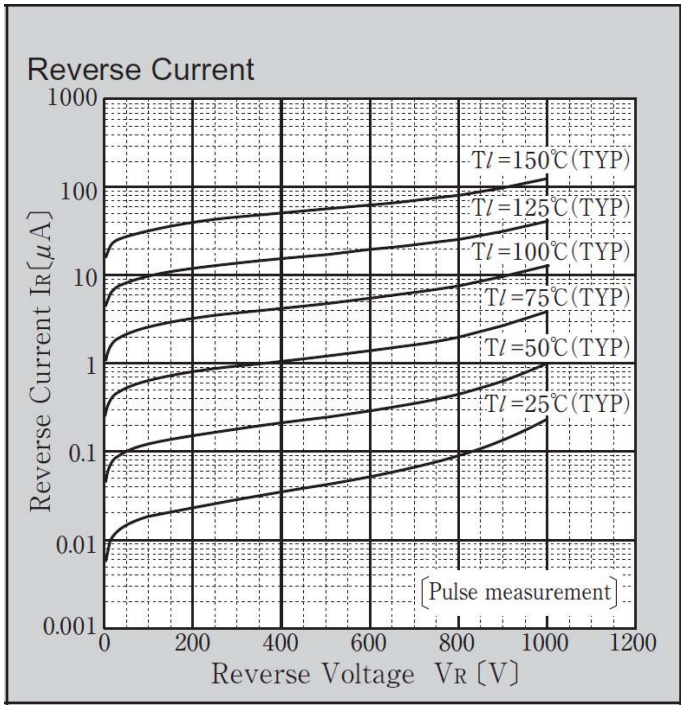
## Electrical Characteristics (unless otherwise specified : Tl=25℃)

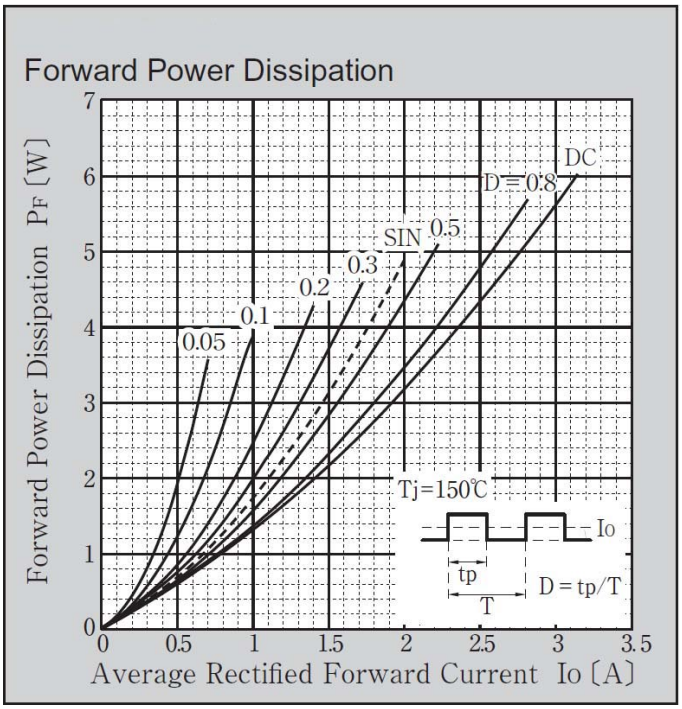
| Item | Symbol | Conditions | Ratings | | | Unit |
|---|---|---|---|---|---|---|
| | | | MIN | TYP | MAX | |
| Forward voltage | $V_F$ | IF=2A, Pulse measurement | | | 2.1 | V |
| Reverse current | $I_R$ | VR=1000V, Pulse measurement | | | 10 | μA |
| Reverse recovery time | trr | IF=0.5A, IR=1.0A, 0.25IR | | | 75 | ns |
| Reverse recovery time | trr | IF=1.0A, VR=400V, di/dt=-50A/μs, 0.25IR | | | 85 | ns |
| Total capacitance | Ct | f=1MHz, VR=10V | | 14 | | pF |
| Thermal resistance | Rth(j-l) | Junction to lead, On glass-epoxy substrate ※ | | | 12 | ℃/W |
| Thermal resistance | Rth(j-a) | Junction to ambient, On glass-epoxy substrate ※ | | | 83 | ℃/W |

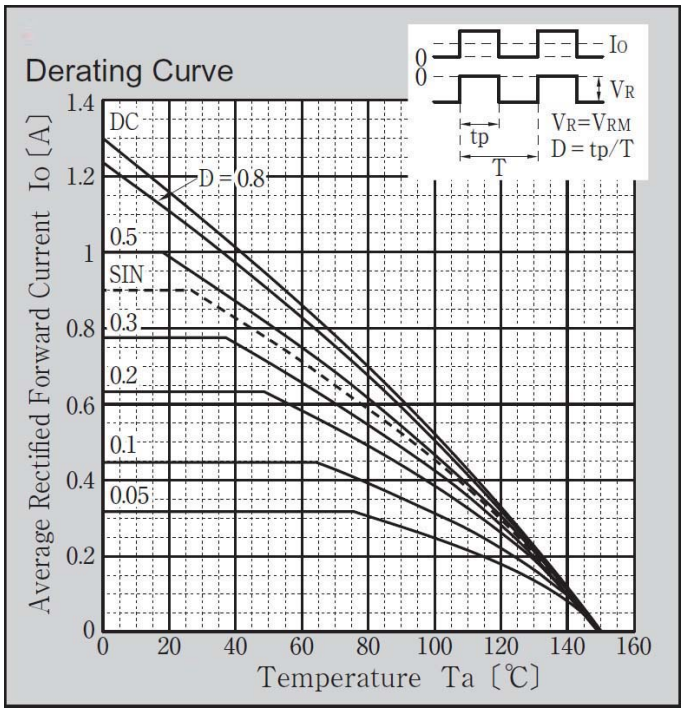
※ :See the original Specifications

## CHARACTERISTIC DIAGRAMS

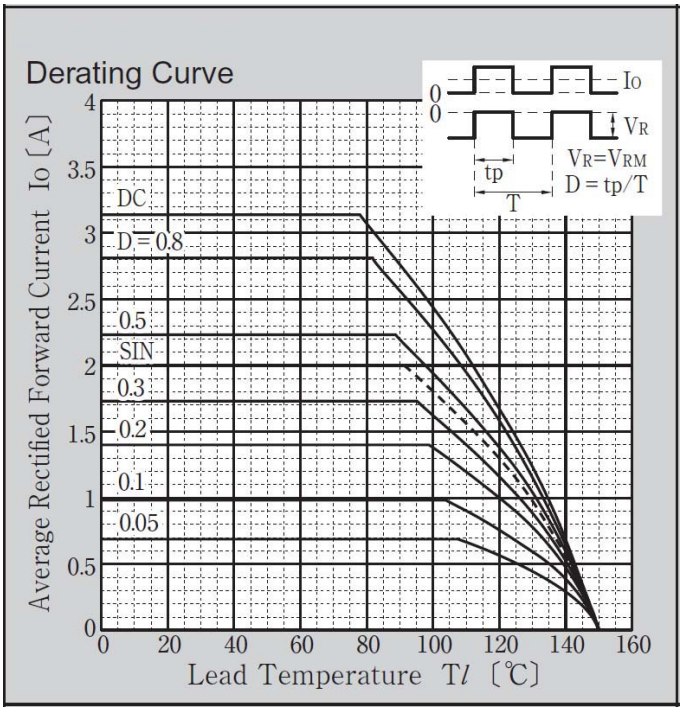


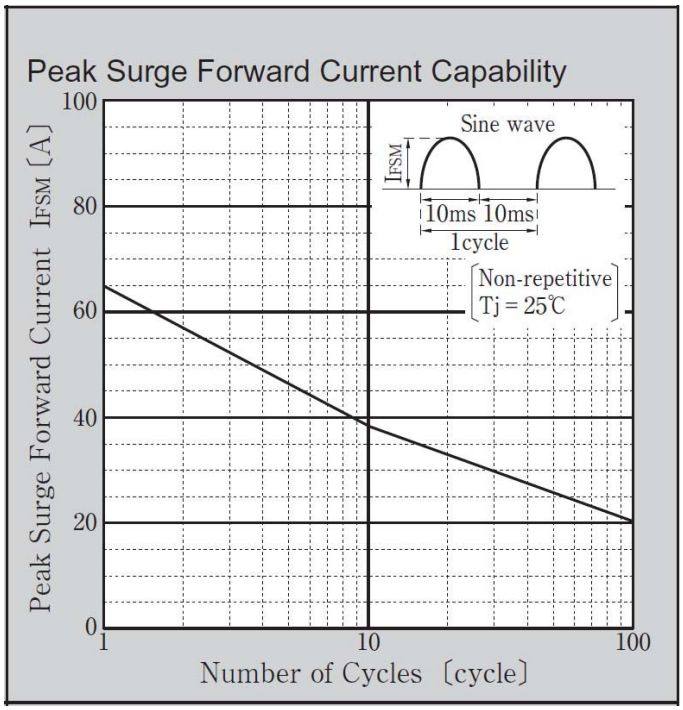



## Derating Curve




## Peak Surge Forward Current Capability

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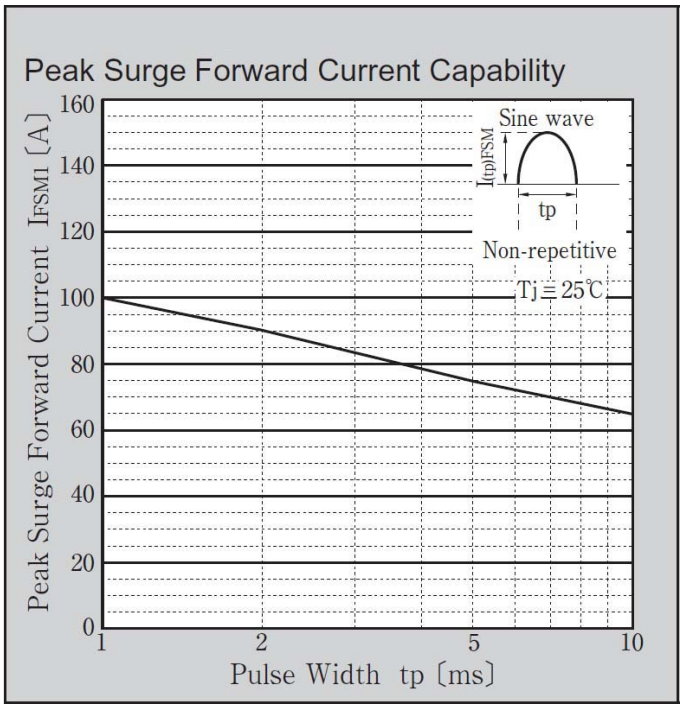
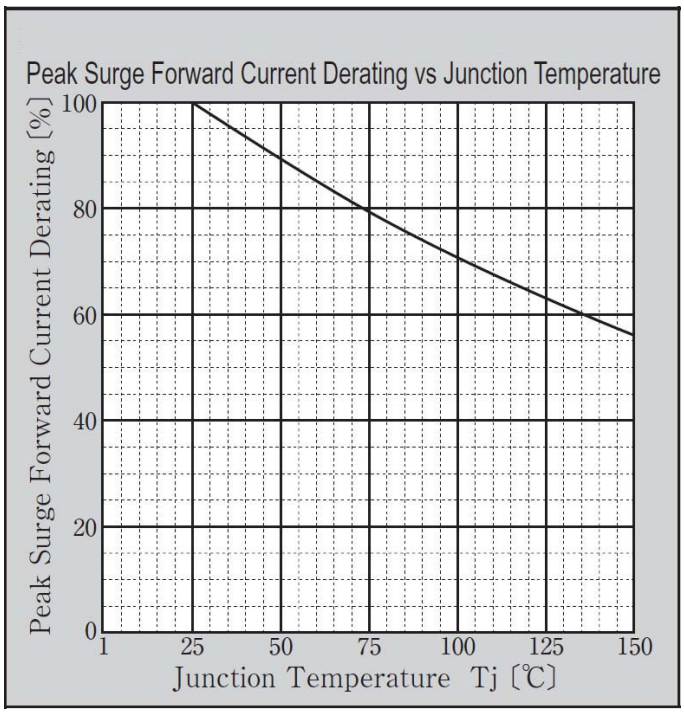
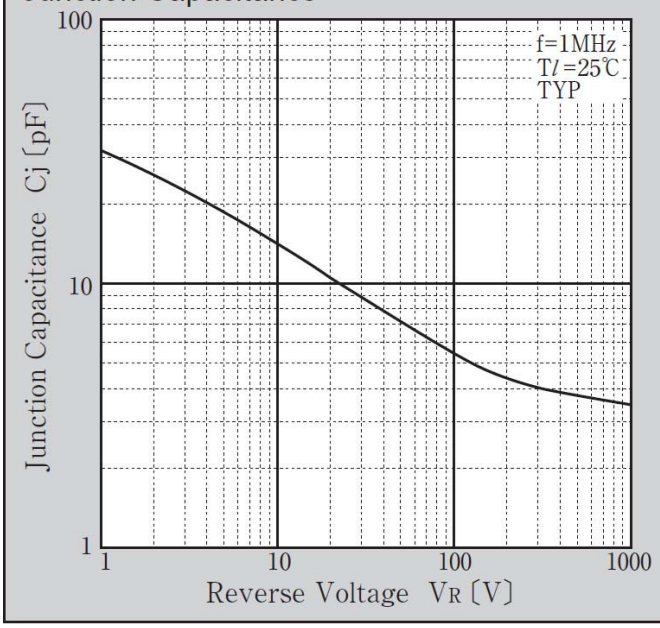


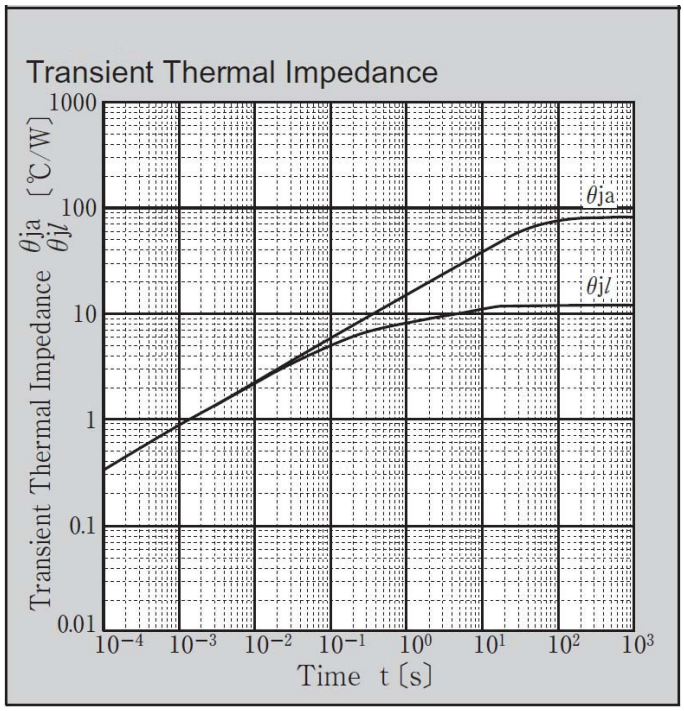

## Peak Surge Forward Current Derating vs Junction Temperature



Junction Capacitance




Transient Thermal Impedance



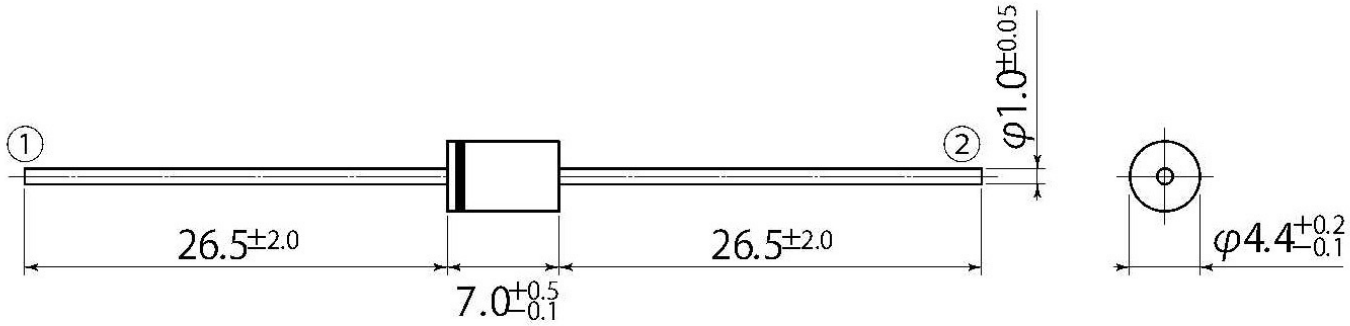
## Outline Dimensions

unit:mm

scale: 2/1

A5

| | |
|---|---|
| JEDEC Code | – |
| JEITA Code | – |
| House Name | AX10 |



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