ShinDengen

# K1V22

## SIDACs / Bi-directional (K1V Series)
## 180V, 10μA

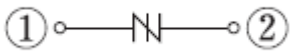
### Feature

- Bi-directional type
- Wide-ranging pulse generation
- Direct switching with commercial power
- A reliable product with a track record, developed for many applications
- 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 | | -40 to 125 | ℃ |
| Junction temperature | Tj | | 125 | ℃ |
| Repetitive peak off-state voltage | $V_{DRM}$ | | 180 | V |
| On-state current (r.m.s.) | $I_T$(RMS) | Tl=108℃, 50Hz sine wave, θ=180˚ | 1 | A |
| Surge on-state current | $I_{TSM}$ | Tj=25℃, 50Hz Sine wave, θ=180˚, Non-repetitive 1 cycle peak value | 20 | A |
| Pulse on-state current | $I_{TRM}$ | Ta=25℃, Pulse width to=10μs, Sine wave, f=1kHz | 25 | A |
| Pulse on-state current | $I_{TRM}$ | Ta=25℃, Pulse width to=10μs, Sine wave, f=60Hz | 50 | A |
| Critical rate of rise of on-state current | $di_T/dt$ | | 80 | A/μs |

※ :See the original Specifications

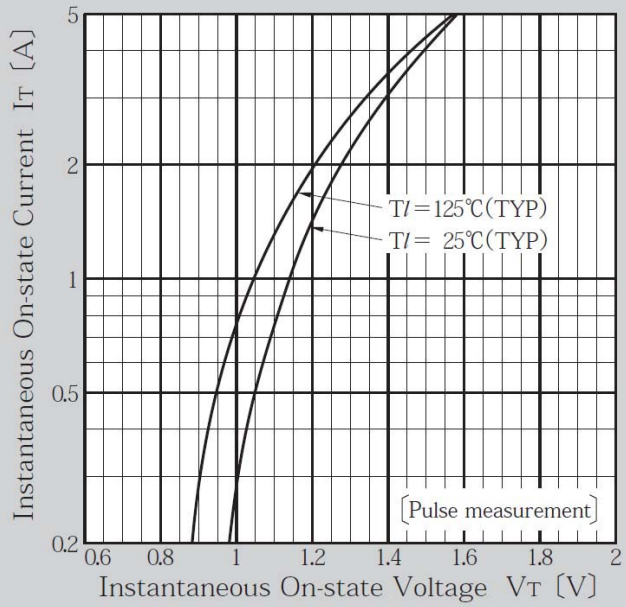
## Electrical Characteristics (unless otherwise specified : Tl=25℃)

| Item | Symbol | Conditions | Ratings | | | Unit |
|---|---|---|---|---|---|---|
| | | | MIN | TYP | MAX | |
| Breakover voltage | $V_{BO}$ | dv/dt=4V/ms, Pulse measurement | 200 | | 230 | V |
| Off-state current | $I_{DRM}$ | VD=180V | | | 10 | μA |
| Breakover current | $I_{BO}$ | | | | 0.5 | mA |
| Holding current | $I_H$ | | | 20 | | mA |
| On-state voltage | $V_T$ | IT=1A | | | 1.5 | V |
| Switching Resistance | Rs | | 0.1 | | | kΩ |
| Thermal Resistance | Rth(j-l) | Junction to lead | | | 15 | ℃/W |

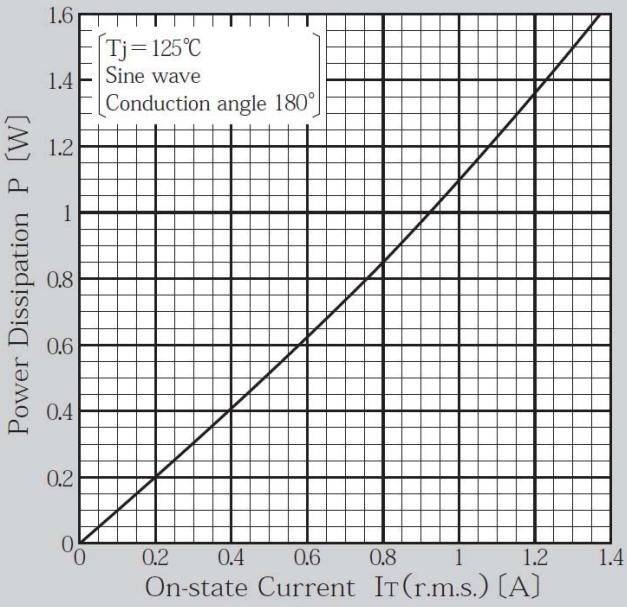
※ :See the original Specifications

## CHARACTERISTIC DIAGRAMS

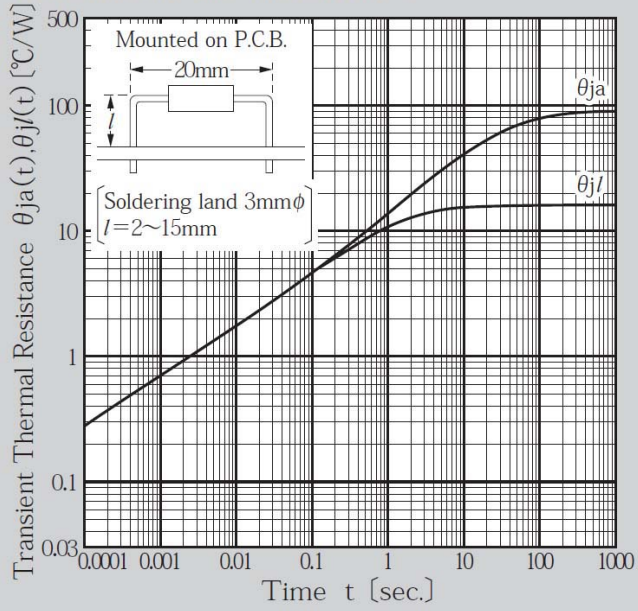
### On-state Voltage vs On-state Current



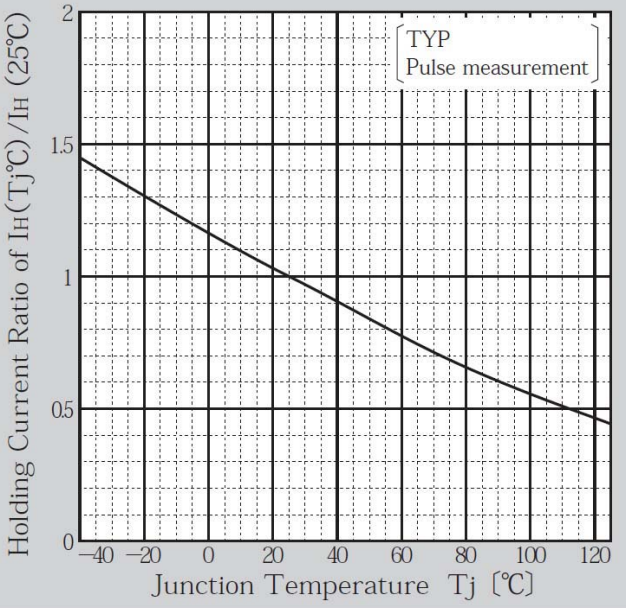

### Power Dissipation



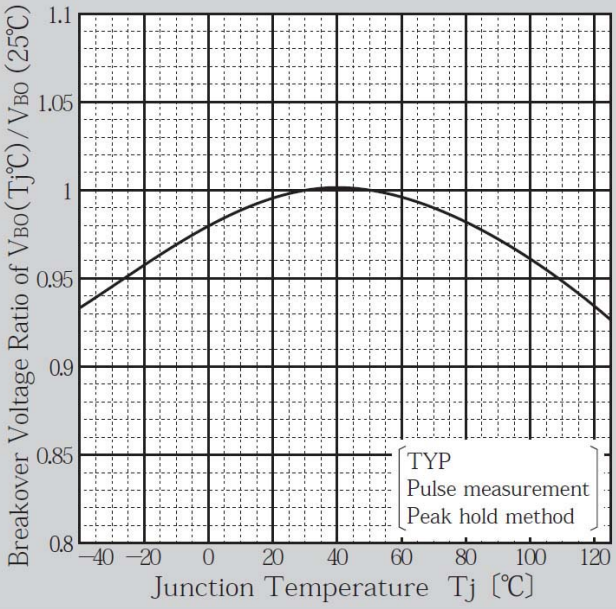

### Transient Thermal Resistance



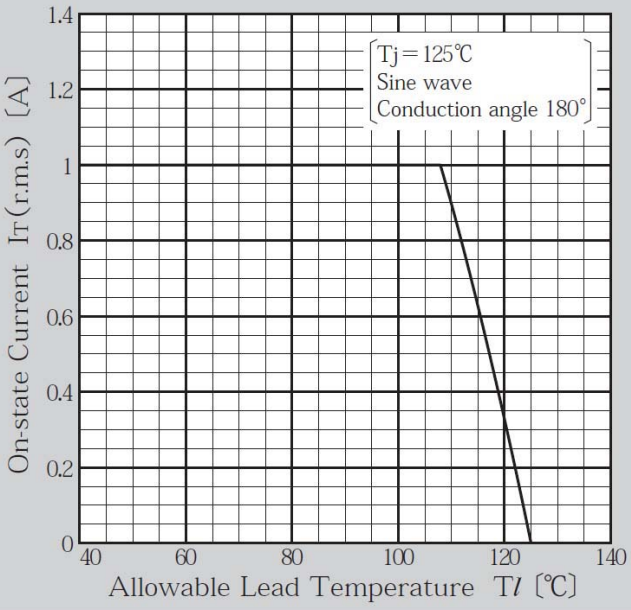

### Holding Current vs Junction Temperature



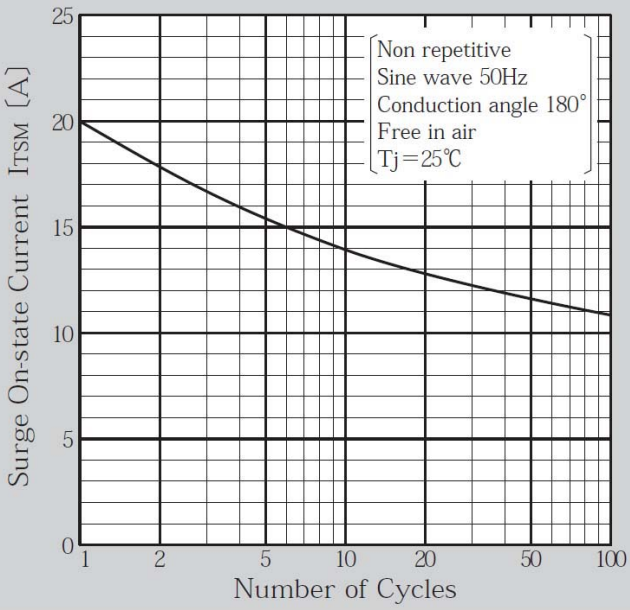
## Breakover Voltage vs Junction Temperature



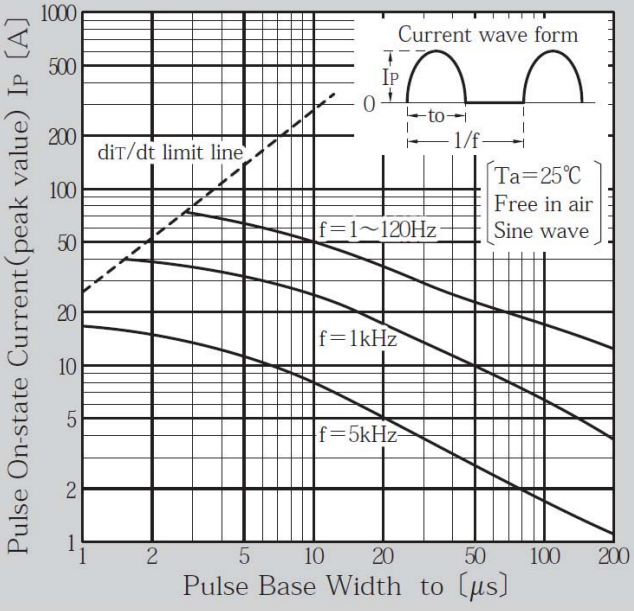

## Max. Lead Temperature



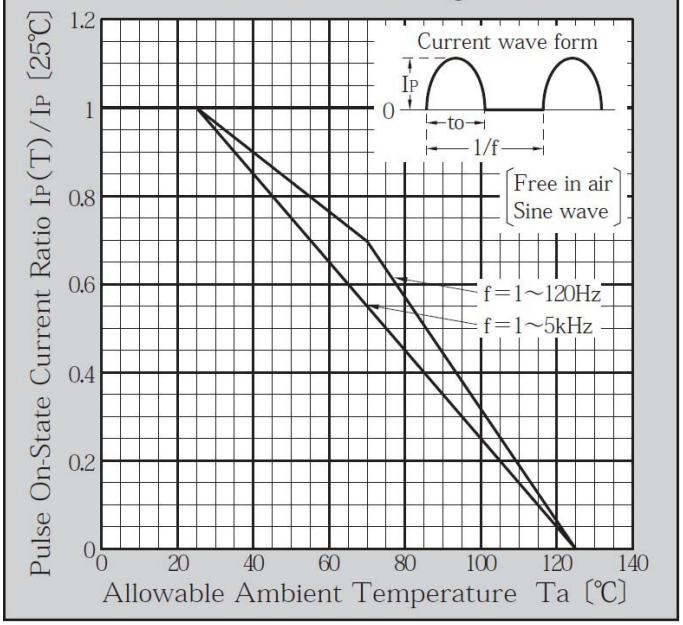

## Surge On-state Current (ITSM)



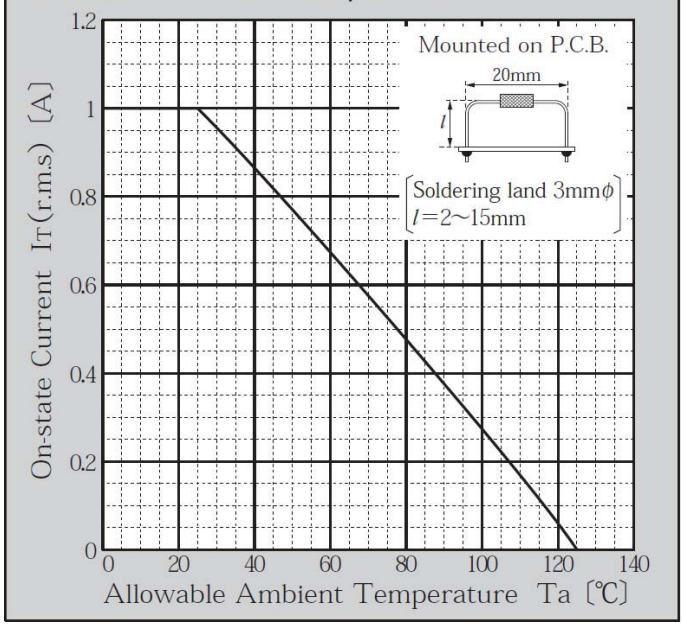

## Pulse On-state Current Rating (ITRM)



## Pulse On-state Current Derating (ITRM)




## Maximum Ambient Temperature



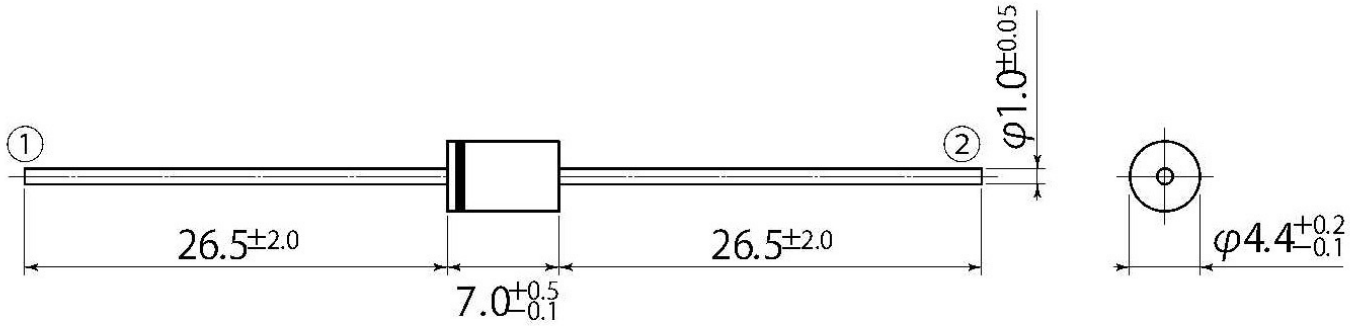
## Outline Dimensions

unit:mm

scale: 2/1

A5

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



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