

# K1V24

## SIDACs / Bi-directional (K1V Series)

180V, 10 $\mu$ A

### Feature

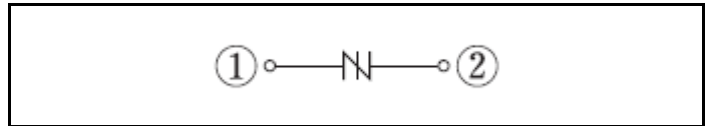
- Bi-directional type
- Wide-ranging pulse generation
- Direct switching with commercial power
- A reliable product with a track record, developed for many applications
- Pb free terminal
- RoHS:Yes

### OUTLINE

Package (House Name): AX10



### Equivalent circuit



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

Item	Symbol	Conditions	Ratings	Unit
Storage temperature	T <sub>stg</sub>		-40 to 125	°C
Junction temperature	T <sub>j</sub>		125	°C
Repetitive peak off-state voltage	V <sub>DRM</sub>		180	V
On-state current (r.m.s.)	I <sub>T(RMS)</sub>	Tl=108°C, 50Hz sine wave, $\theta=180^\circ$	1	A
Surge on-state current	I <sub>TSM</sub>	T <sub>j</sub> =25°C, 50Hz Sine wave, $\theta=180^\circ$ , Non-repetitive 1 cycle peak value	20	A
Pulse on-state current	I <sub>TRM</sub>	T <sub>a</sub> =25°C, Pulse width to=10 $\mu$ s, Sine wave, Repetitive peak value, f=1kHz	25	A
Pulse on-state current	I <sub>TRM</sub>	T <sub>a</sub> =25°C, Pulse width to=10 $\mu$ s, Sine wave, Repetitive peak value, f=60Hz	50	A
Critical rate of rise of on-state current	di <sub>T</sub> /dt		80	A/ $\mu$ s

\* : See the original Specifications

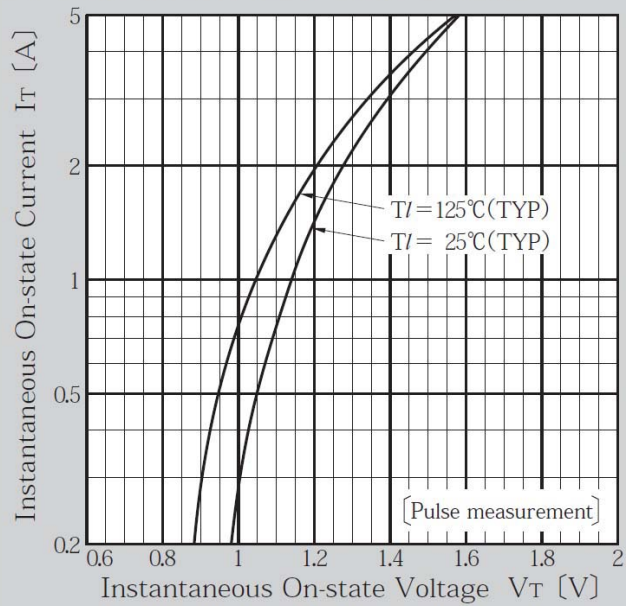
**Electrical Characteristics** (unless otherwise specified : Tl=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Breakover voltage	$V_{BO}$	dv/dt=4V/ms, Pulse measurement	220		250	V
Off-state current	$I_{DRM}$	VD=180V			10	$\mu$ A
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	$R_s$		0.1			k $\Omega$
Thermal Resistance	$R_{th(j-l)}$	Junction to lead			15	$^{\circ}$ C/W

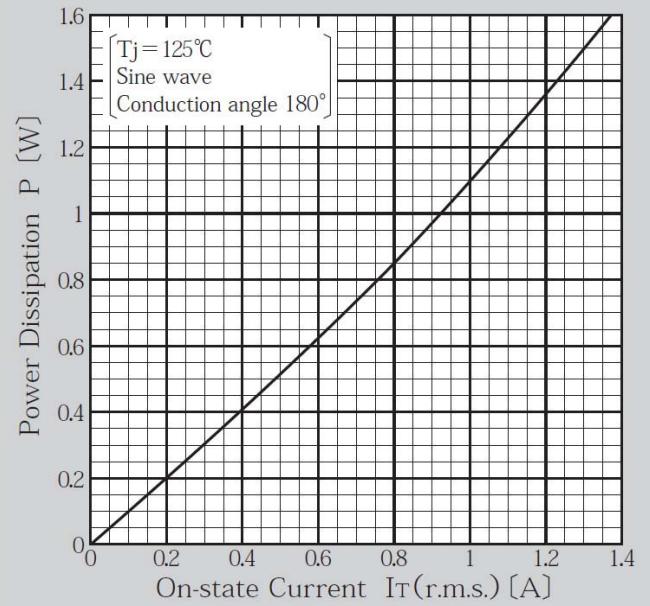
\* :See the original Specifications

# CHARACTERISTIC DIAGRAMS

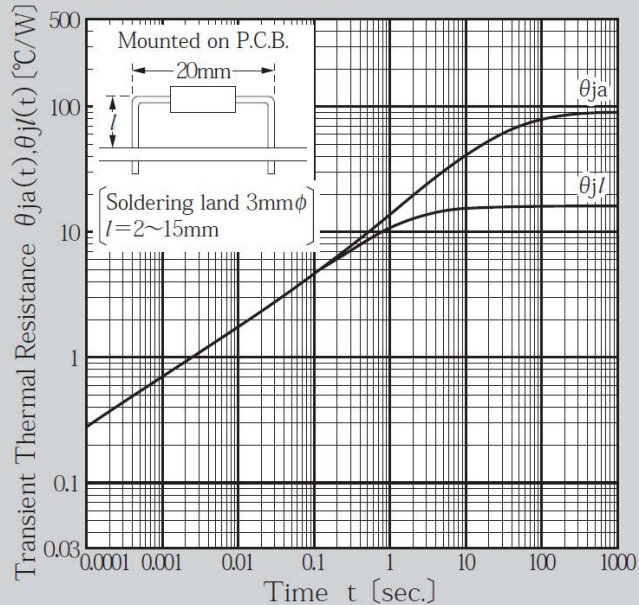
### On-state Voltage vs On-state Current



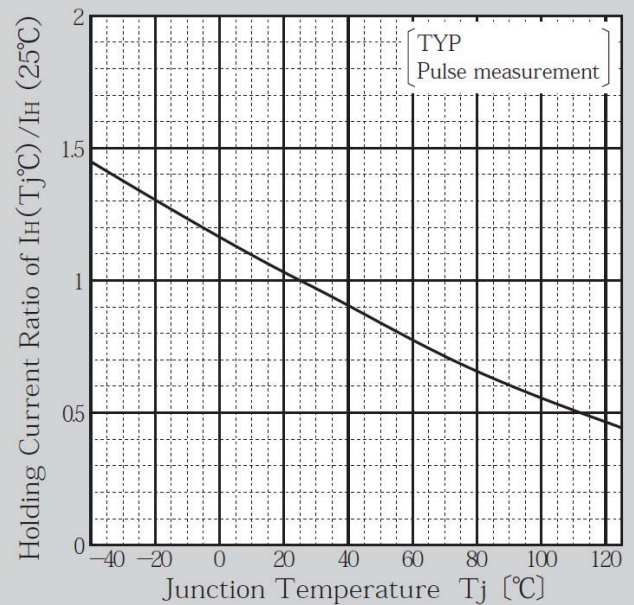
### Power Dissipation



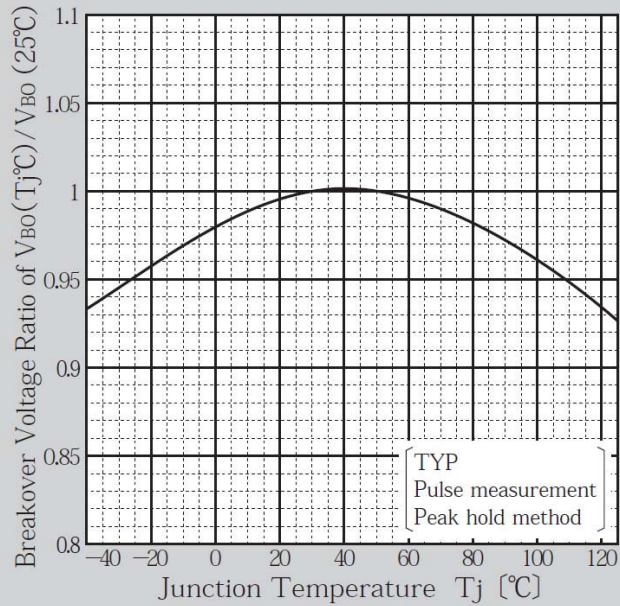
### Transient Thermal Resistance



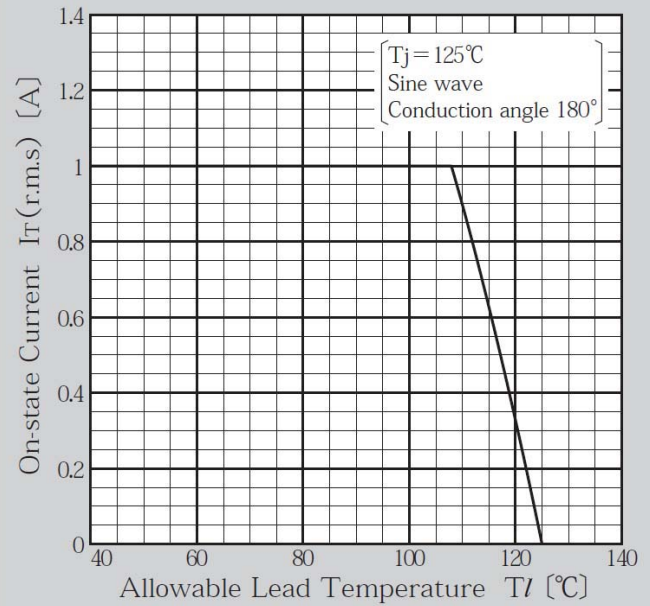
### Holding Current vs Junction Temperature



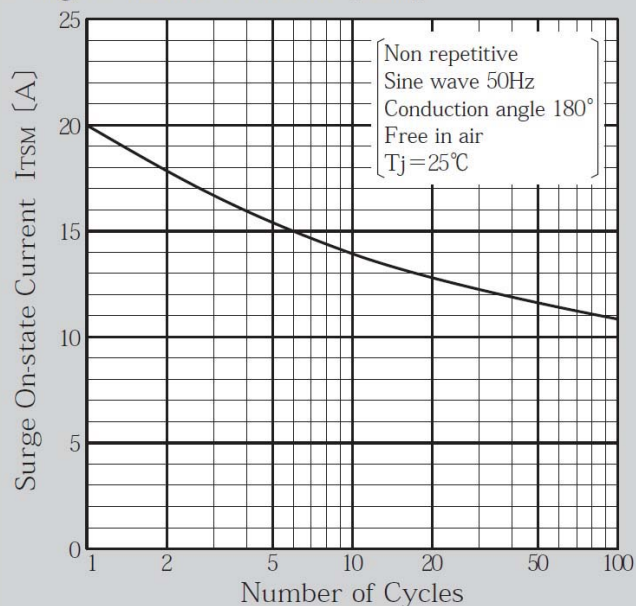
Breakover Voltage vs Junction Temperature



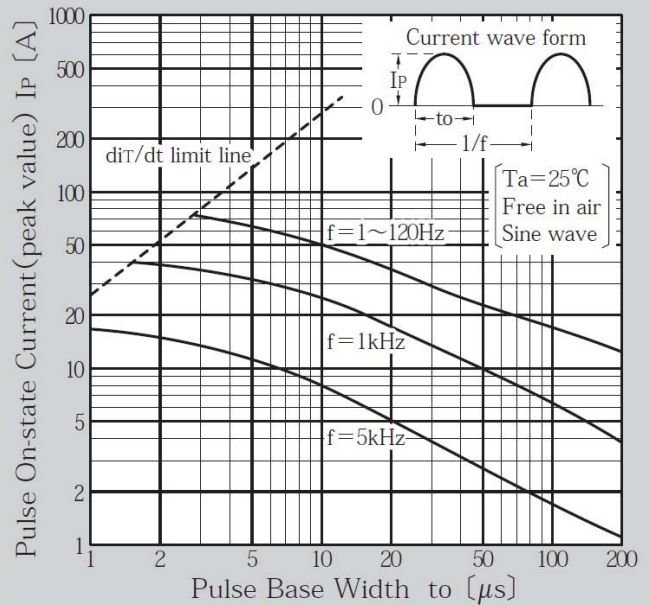
Max. Lead Temperature



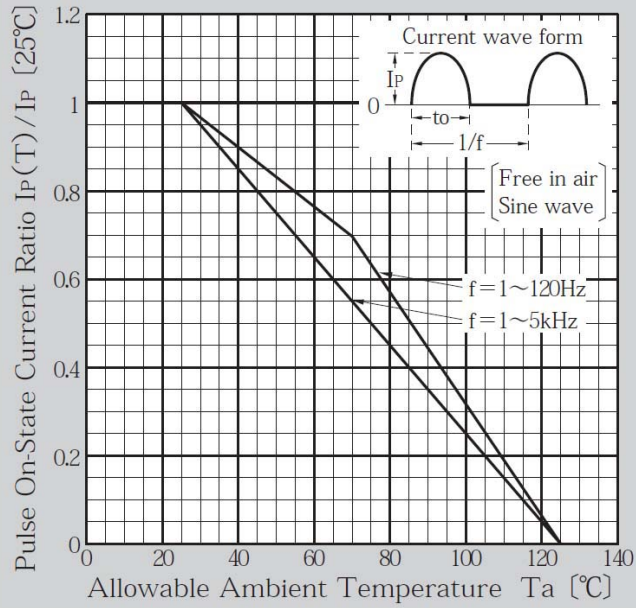
Surge On-state Current ( $I_{TSM}$ )



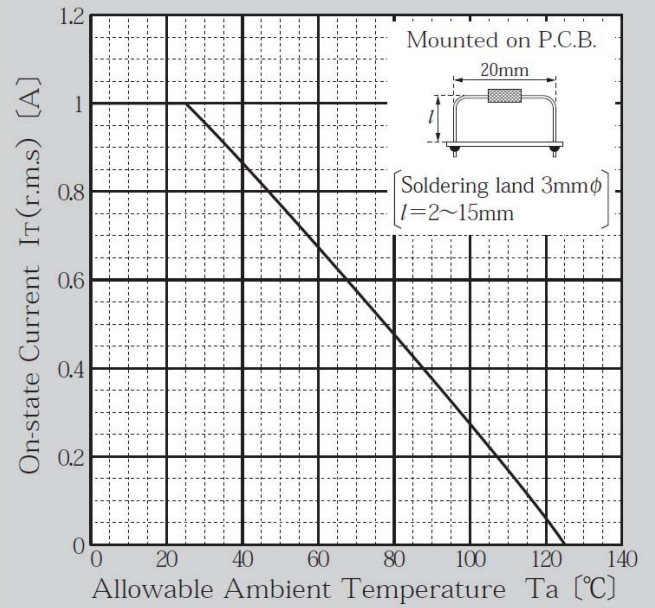
Pulse On-state Current Rating ( $I_{TRM}$ )



### Pulse On-state Current Derating (ITRM)



### Maximum Ambient Temperature



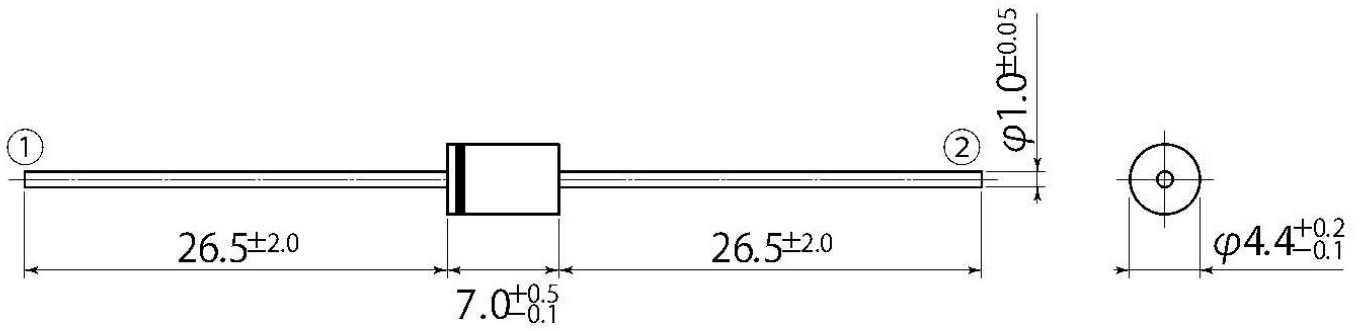
# Outline Dimensions

unit:mm

scale: 2/1

## A5

JEDEC Code	—
JEITA Code	—
House Name	AX10



## Notes

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