

# K1V12

## SIDACs / Bi-directional (K1V Series)

90V, 10μA

### Feature

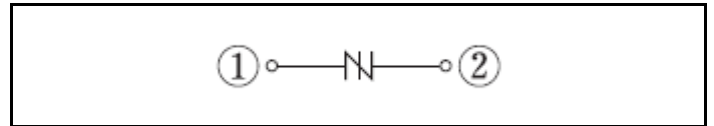
- Bi-directional type
- Wide-ranging pulse generation
- Direct switching with commercial power
- A reliable product with a track record, developed for many applications
- Pb free terminal
- RoHS:Yes

### OUTLINE

Package (House Name): AX10



### Equivalent circuit



### Absolute Maximum Ratings (unless otherwise specified : Tl=25°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>		90	V
On-state current (r.m.s.)	I <sub>T(RMS)</sub>	Tl=112°C, 50Hz sine wave, θ=180°	1	A
Surge on-state current	I <sub>TSM</sub>	Tj=25°C, 50Hz Sine wave, θ=180°, Non-repetitive 1 cycle peak value	20	A
Pulse on-state current	I <sub>TRM</sub>	Ta=25°C, Pulse width to=10μs, Sine wave, f=1kHz	25	A
Pulse on-state current	I <sub>TRM</sub>	Ta=25°C, Pulse width to=10μs, Sine wave, f=60Hz	80	A
Critical rate of rise of on-state current	di <sub>T</sub> /dt		80	A/μs

※ :See the original Specifications

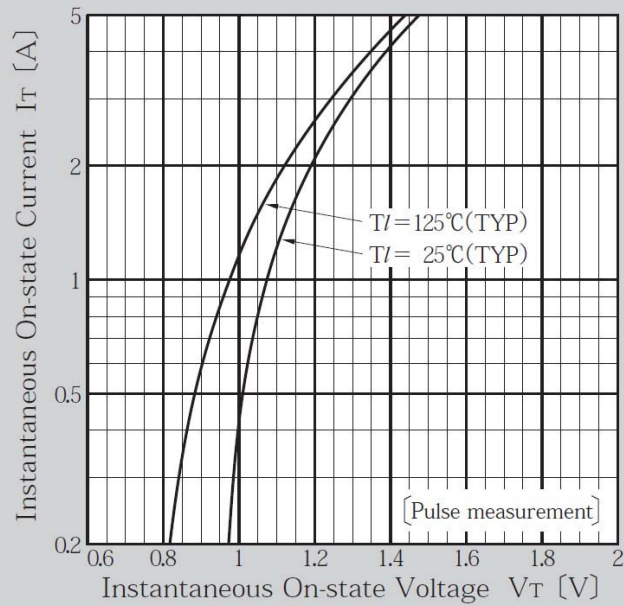
**Electrical Characteristics** (unless otherwise specified : Tl=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Breakover voltage	$V_{BO}$	dv/dt=4V/ms, Pulse measurement	110		125	V
Off-state current	$I_{DRM}$	VD=90V			10	$\mu$ A
Breakover current	$I_{BO}$				0.5	mA
Holding current	$I_H$			50		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

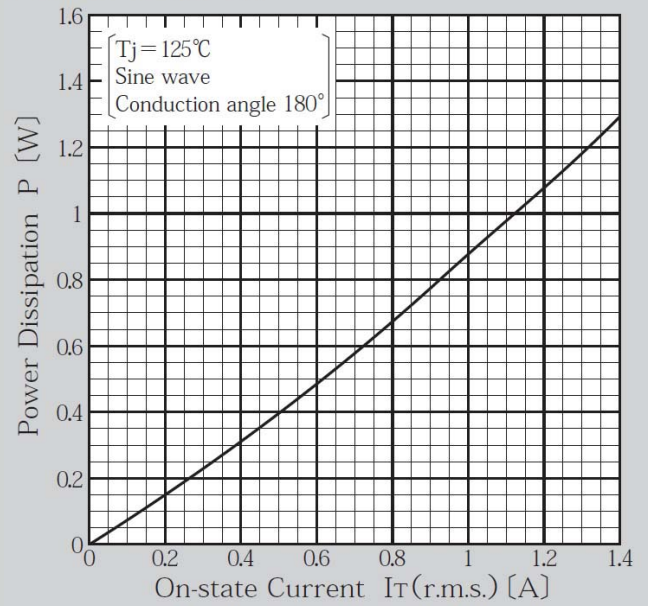
\* :See the original Specifications

# CHARACTERISTIC DIAGRAMS

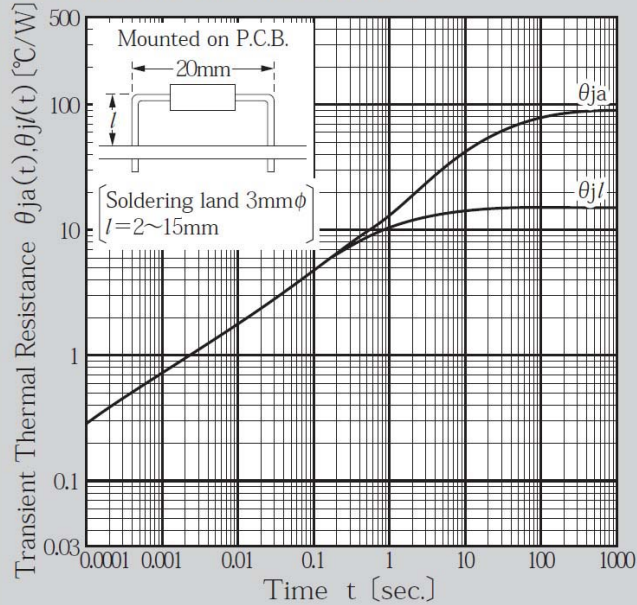
### On-state Voltage vs On-state Current



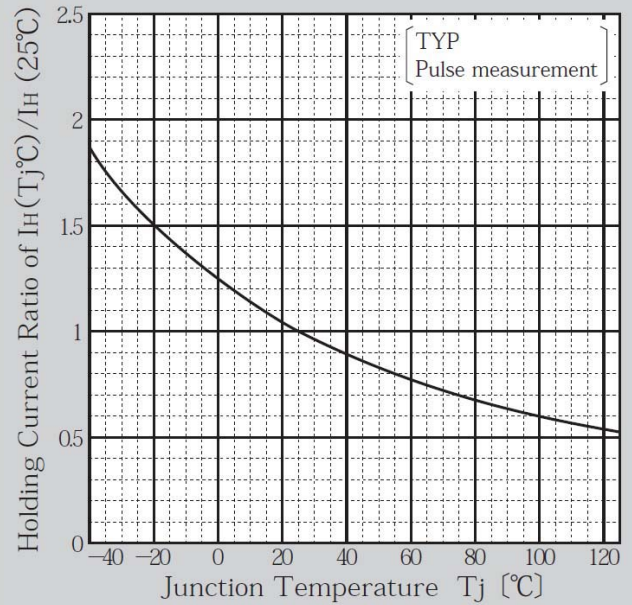
### Power Dissipation



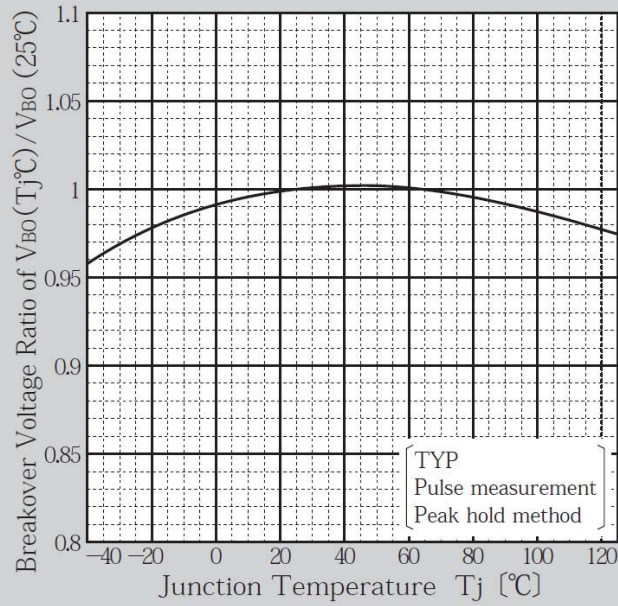
### Transient Thermal Resistance



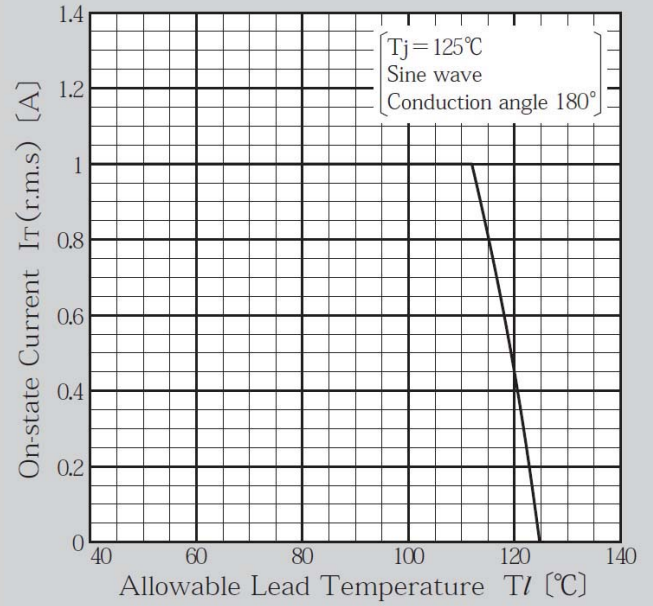
### Holding Current vs Junction Temperature



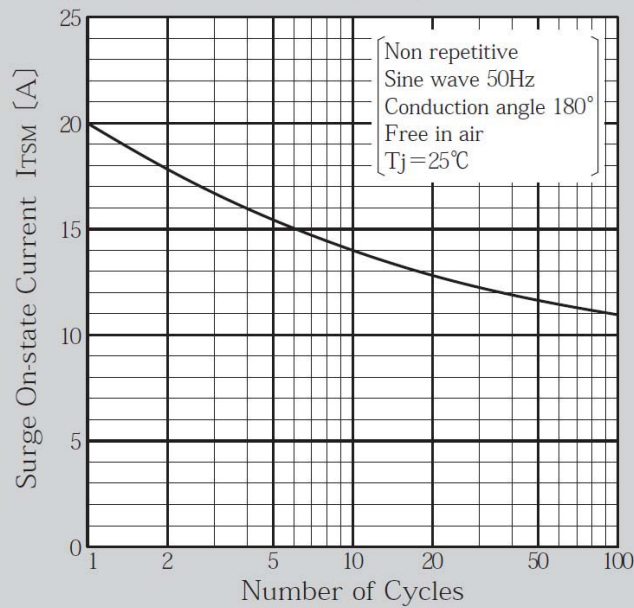
Breakover Voltage vs Junction Temperature



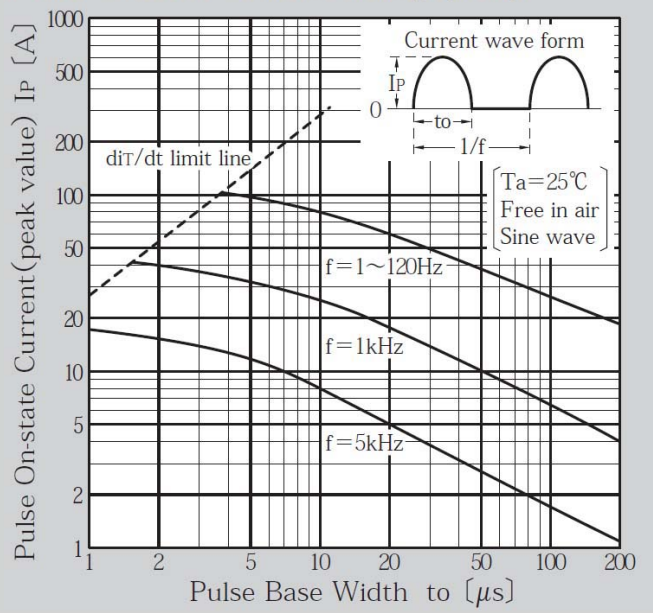
Max. Lead Temperature



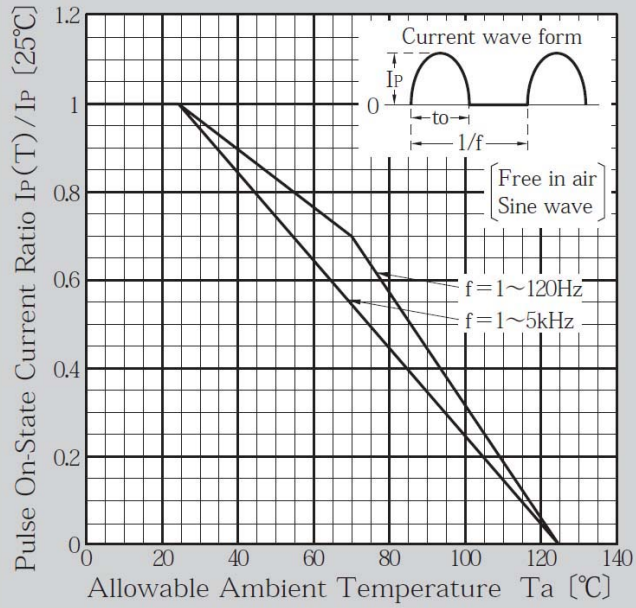
Surge On-state Current ( $I_{TSM}$ )



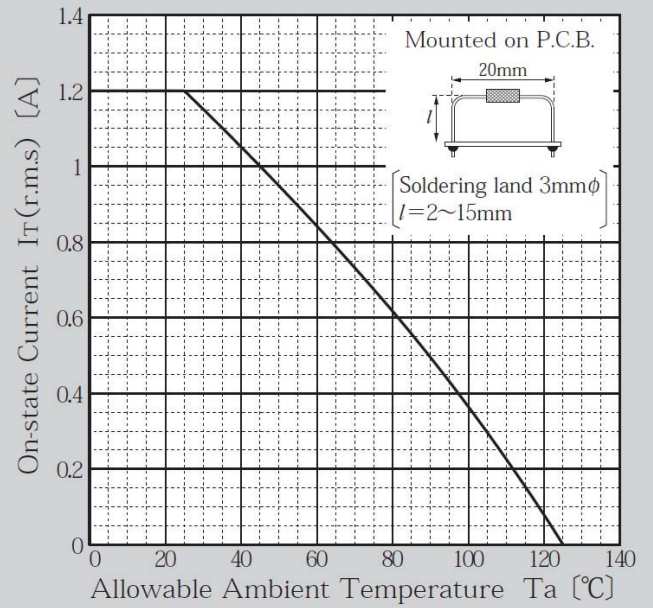
Pulse On-state Current Rating ( $I_{TRM}$ )



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



### Maximum Ambient Temperature



# Outline Dimensions

unit:mm

scale: 2/1

## A5

JEDEC Code	—
JEITA Code	—
House Name	AX10

