ShinDengen

K1V24(W)

SIDACs / Bi-directional (K1V Series)

180V, 10μA

Feature

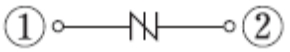
- Bi-directional type
- Wide-ranging pulse generation
- Direct switching with commercial power
- A reliable product with a track record, developed for many applications
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): AX10



Equivalent circuit



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

Item	Symbol	Conditions	Ratings	Unit
Storage temperrature	Tstg		-40 to 125	°C
Junction temperature	Tj		-40 to 125	°C
Repetitive peak off-state voltage	V_{DRM}		180	V
On-state current (r.m.s.)	I_T(RMS)	Tl=91°C, 50Hz sine wave, θ=180˚, On glass-epoxy substrate	1	A
Surge on-state current	I_{TSM}	Tj=25°C, 50Hz Sine wave, θ=180˚, Non-repetitive 1 cycle peak value	16	A
Pulse on-state current	I_{TRM}	Ta=25°C, Pulse width to=10μs, Sine wave, f=1kHz	17	A
Pulse on-state current	I_{TRM}	Ta=25°C, 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

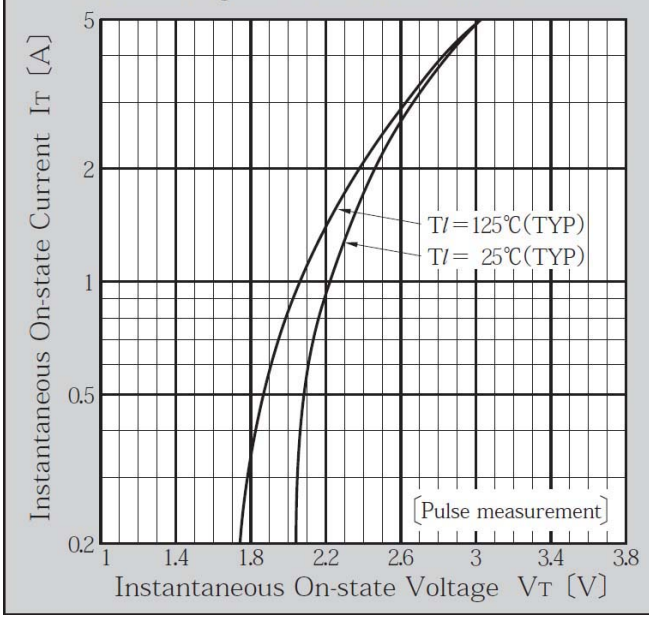
Electrical Characteristics (unless otherwise specified : Tl=25°C)

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	μA
Breakover current	I_{BO}				0.5	mA
Holding current	I_H			50		mA
On-state voltage	V_T	IT=1A			3	V
Switching Resistance	Rs		0.1			kΩ
Thermal Resistance	Rth(j-l)	Junction to lead, On glass-epoxy substrate			15	°C/W

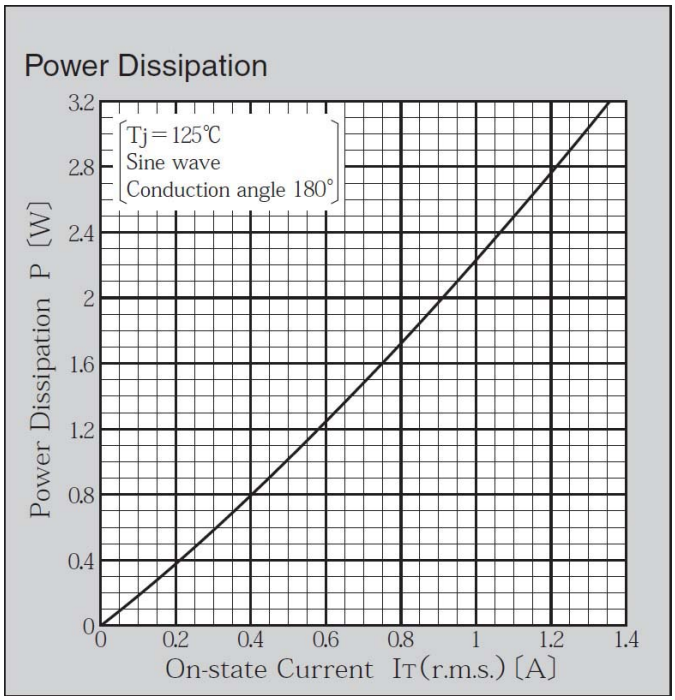
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

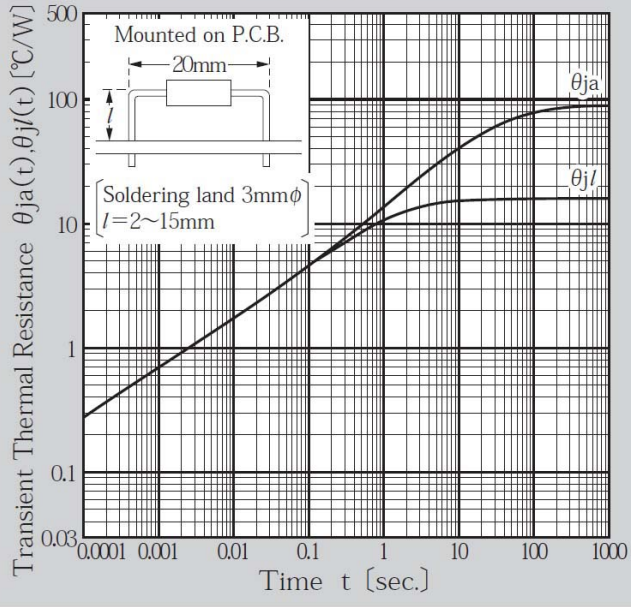
On-state Voltage vs On-state Current



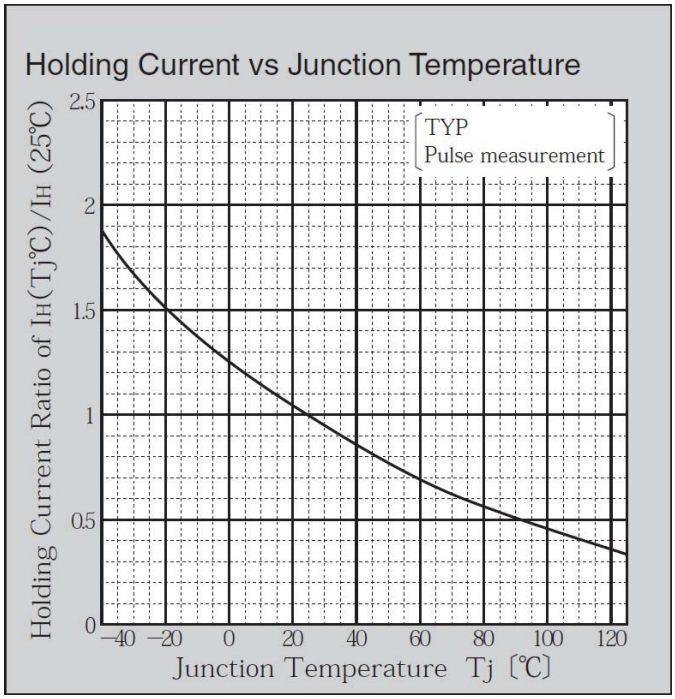
Power Dissipation



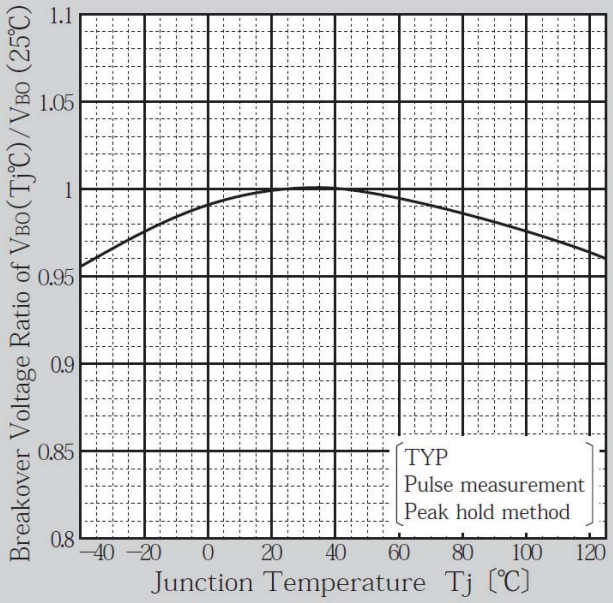
Transient Thermal Resistance



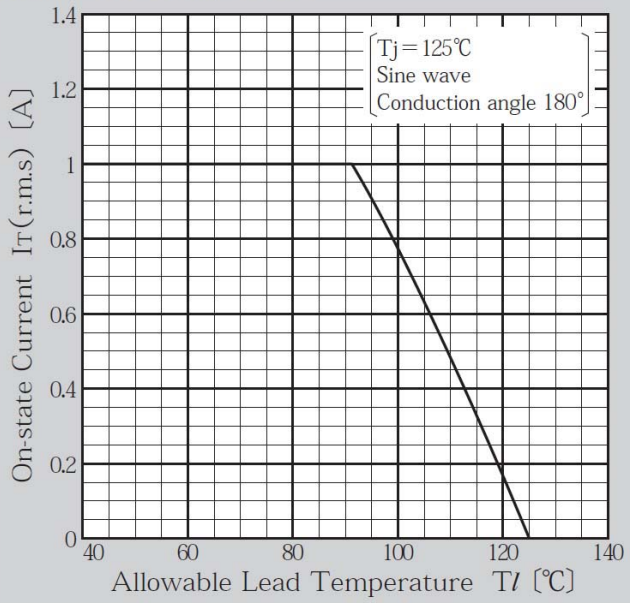
Holding Current vs Junction Temperature



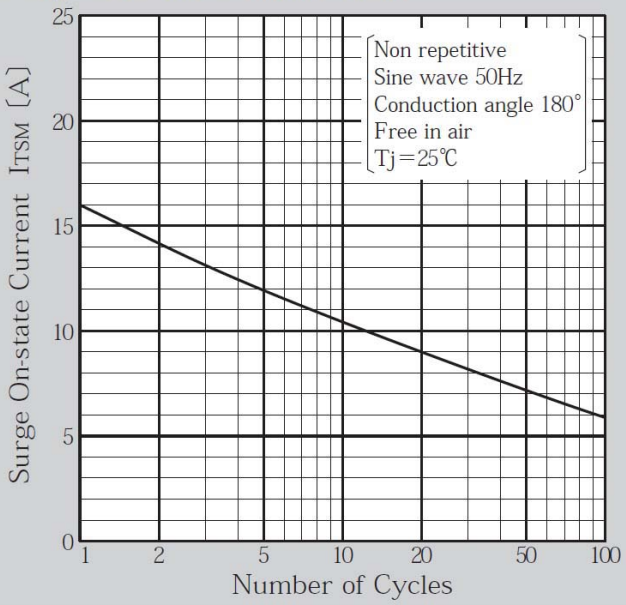
Breakover Voltage vs Junction Temperature



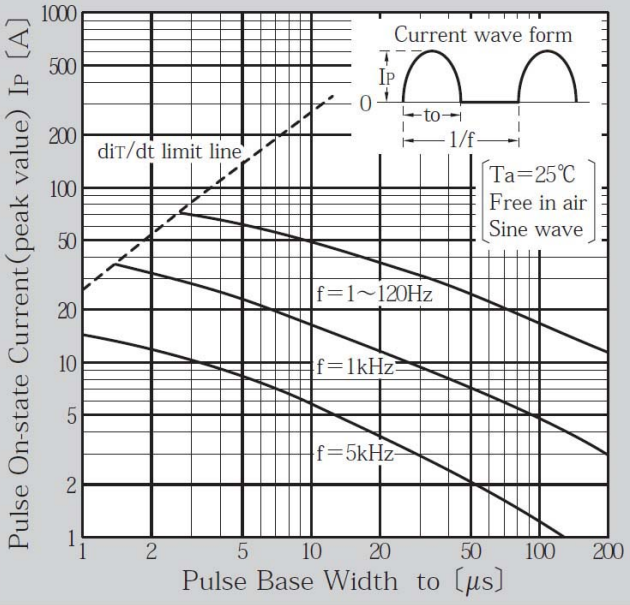
Max. Lead Temperature



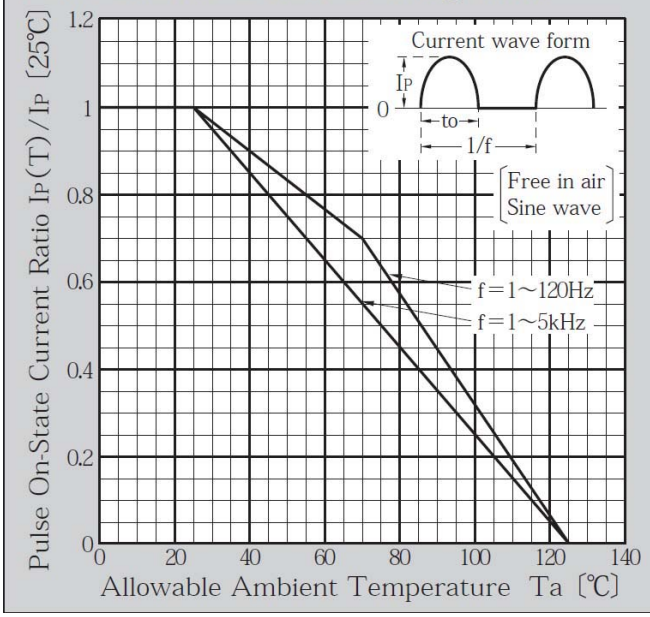
Surge On-state Current (ITSM)



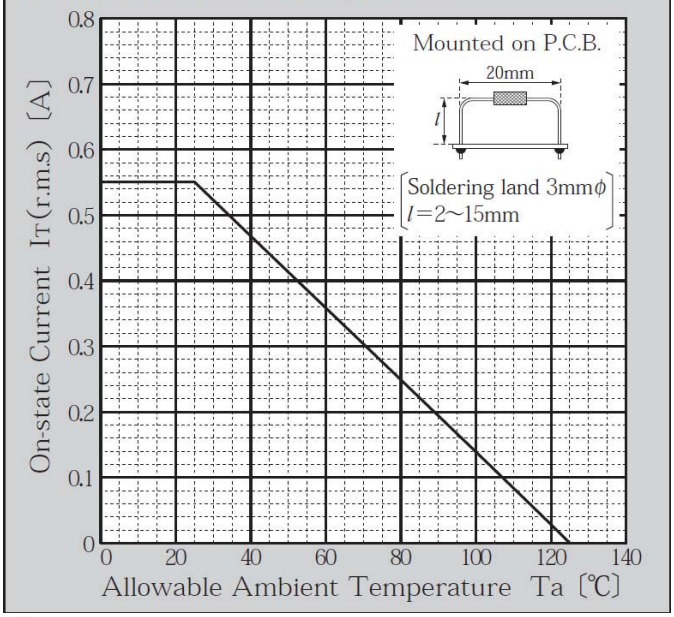
Pulse On-state Current Rating (ITRM)



Pulse On-state Current Derating (ITRM)



Maximum Ambient Temperature



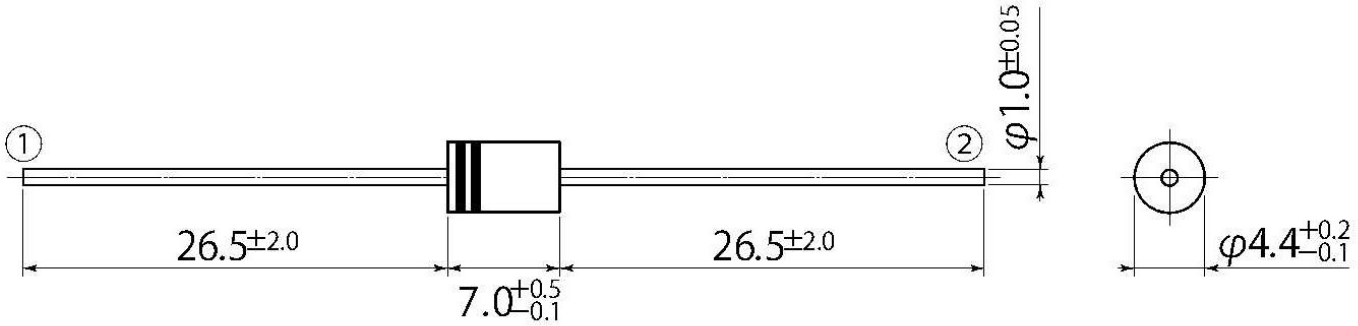
Outline Dimensions

unit:mm

scale: 2/1

A6

JEDEC Code	–
JEITA Code	–
House Name	AX10



Notes

1. If you wish to use any such product, please be sure to refer to the specifications issued by Shindengen.
2. All products described or contained herein are designed with a quality level intended for use in standard applications requiring an ordinary level of reliability. If these products are to be used in equipment or devices for special or specific applications requiring an extremely high grade of quality or reliability in which failures or malfunctions of products may directly affect human life or health, a local Shindengen office must be contacted in advance to confirm that the intended use of the product is appropriate. Shindengen products are grouped into the following three applications according the quality grade.

   【Standard applications】
   Computers, office automation and other office equipment, communication terminals, test and measurement equipment, audio/visual equipment, amusement equipment, consumer electronics, machine tools, personal electronic equipment, industrial equipment, etc.
   【Special applications】
   Transportation equipment (vehicles, ships, etc.), trunk-line communication equipment, traffic signal control systems, anti-disaster/crime systems, safety equipment, medical equipment, etc.
   【Specific applications】
   Nuclear reactor control systems, aircraft, aerospace equipment, submarine repeaters, life support equipment and systems, etc.
3. Although Shindengen continuously endeavors to enhance the quality and reliability of its products, customers are advised to consider and take safety measures in their design, such as redundancy, fire containment and anti-failure, so that personal injury, fires, or societal damages can be prevented.
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