



## 8000W High-power 8KP Series TVS Diode 8KP22A Axial Lead Transient Voltage Suppressor

Our Product Introduction

### Basic Information

- Place of Origin: Shenzhen, Guangdong, China
- Brand Name: SOCAY
- Certification: UL, REACH, RoHS, ISO
- Model Number: 8KP22A
- Minimum Order Quantity: 250PCS
- Price: Negotiable
- Delivery Time: 5-8 work days



### Product Specification

- Product Name: TVS Diodes
- Package Type: R6/P600
- Vrwm: 22.0V
- Vbr@It (Min.): 24.4V
- Vbr@It (Max.): 26.9V
- It: 5mA
- Vc@Ipp: 35.5V
- Ipp: 225A
- Ir@Vrwm: 5 $\mu$ A
- Storage Temperature Range: -55 To +150

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## Product Description

### 8000W High-power 8KP Series TVS Diode 8KP22A Axial Lead Transient Voltage Suppressor

**DATASHEET:** [8KP Series\\_v2309.1.pdf](#)

#### Description:

The 8KP series is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

Part Number		Reverse Stand-Off Voltage $V_{RWM}$ (V)	Breakdown Voltage $V_{BR}$ (V) @ $I_T$		Test Current $I_T$ (mA)	Maximum Clamping Voltage $V_C$ (V) @ $I_{PP}$	Maximum Peak Pulse Current $I_{PP}$ (A)	Maximum Reverse Leakage $I_R$ ( $\mu$ A) @ $V_{RWM}$
Uni	Bi		MIN	MAX				
8KP18A	8KP18CA	18	20.0	22.1	5	29.2	273.9	5
8KP20A	8KP20CA	20	22.2	24.5	5	32.4	246.9	5
8KP22A	8KP22CA	22	24.4	26.9	5	35.5	225	5
8KP24A	8KP24CA	24	26.7	29.5	5	38.9	206	5
8KP30A	8KP30CA	30	33.3	36.8	5	48.4	165	5
8KP33A	8KP33CA	33	36.7	40.6	5	53.3	150	5
8KP36A	8KP36CA	36	40.0	44.2	5	58.1	148	5
8KP40A	8KP40CA	40	44.4	49.1	5	64.5	124	5
8KP43A	8KP43CA	43	47.8	52.8	5	69.4	115	5
8KP45A	8KP45CA	45	50.0	55.3	5	72.7	110	5
8KP48A	8KP48CA	48	53.3	58.9	5	77.4	103.4	5
8KP51A	8KP51CA	51	56.7	62.7	5	82.4	97.1	5

#### Features:

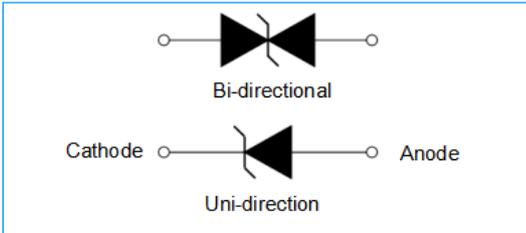
- u Glass passivated chip junction in P600 Package
- u Low leakage
- u Uni and Bidirectional unit
- u Excellent clamping capability
- u 8000W Peak power capability at 10 × 1000 $\mu$ s waveform Repetition rate (duty cycle):0.01%
- u Fast response time
- u RoHS compliant

#### Applications:

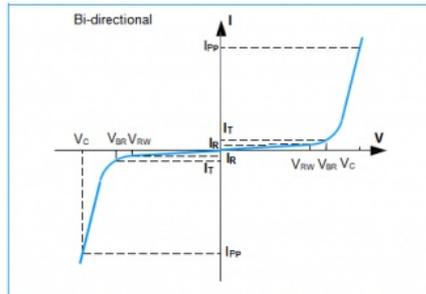
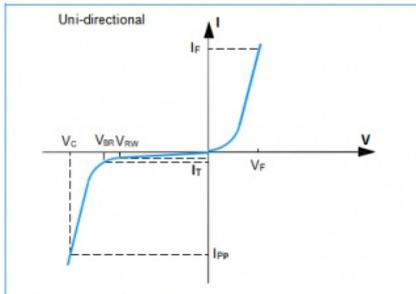
TVS devices are ideal for the protection of I/O interfaces, VCC bus and other vulnerable circuits used in Telecom, Computer, Industrial and Consumer electronic applications .

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation with a 10/1000 $\mu$ s waveform (Fig.1)(Note 1), (Note 2)	$P_{PPM}$	8000	Watts
Peak Pulse Current with a 10/1000 $\mu$ s waveform.(Note1 ,Fig.3)	$I_{PP}$	See Next Table	Amps
Power Dissipation on Infinite Heat Sink at $T_L=75^\circ$ C	$P_{M(AV)}$	8.0	Watt
Peak Forward Surge Current, 8.3ms Single Half Sine Wave (Note 3)	$I_{FSM}$	500	Amps
Operating junction and Storage Temperature Range.	$T_J, T_{STG}$	-55 to +150	$^\circ$ C

## Functional Diagram



## I-V Curve Characteristics



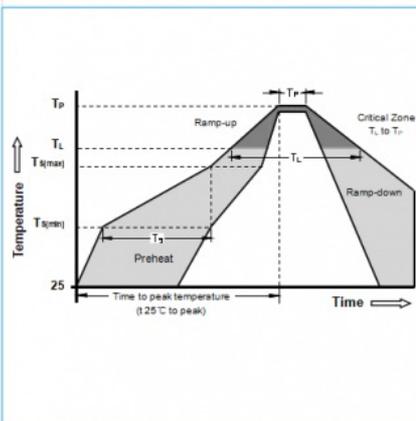
## Physical Specifications

<b>Weight</b>	0.007 ounce, 0.21 gram
<b>Case</b>	JEDEC DO-214AB Molded Plastic over glass passivated junction
<b>Polarity</b>	Color band denotes cathode except Bipolar
<b>Terminal</b>	Matte Tin-plated leads, Solderable per JESD22-B102D

## Environmental Specifications

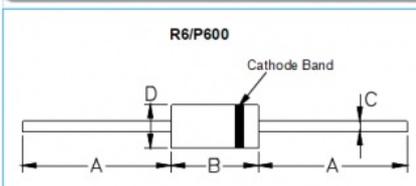
<b>Temperature Cycle</b>	JESD22-A104
<b>Pressure Cooker</b>	JESD22-A102
<b>High Temp. Storage</b>	JESD22-A103
<b>HTRB</b>	JESD22-A108
<b>Thermal Shock</b>	JESD22-A106

## Soldering Parameters



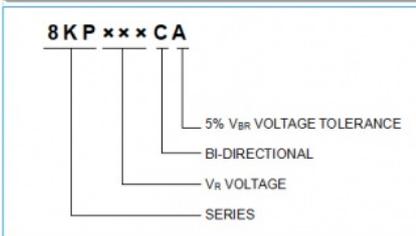
<b>Reflow Condition</b>		Lead-free assembly
<b>Pre Heat</b>	- Temperature Min ( $T_{s(min)}$ )	150°C
	- Temperature Max ( $T_{s(max)}$ )	200°C
	- Time (min to max) ( $T_s$ )	60 - 180 Seconds
<b>Average ramp up rate (Liquidus Temp <math>T_L</math>) to peak</b>		3°C/second max
<b><math>T_{s(max)}</math> to <math>T_L</math> - Ramp-up Rate</b>		3°C/second max
<b>Reflow</b>	- Temperature ( $T_L$ ) (Liquidus)	217°C
	- Time (min to max) ( $T_L$ )	60 - 150 Seconds
<b>Peak Temperature (<math>T_P</math>)</b>		260 +0/-5°C
<b>Time within 5°C of actual peak Temperature (<math>t_p</math>)</b>		20 - 40 Seconds
<b>Ramp-down Rate</b>		6°C/second max
<b>Time 25°C to peak Temperature (<math>T_P</math>)</b>		8 minutes Max
<b>Do not exceed</b>		280°C

## Dimensions

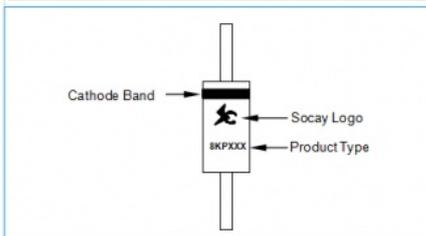


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	1.000	-	25.40	-
B	0.340	0.360	8.64	9.14
C	0.048	0.052	1.22	1.32
D	0.340	0.360	8.64	9.14

## Part Numbering



## Part Marking



Packaging			
Part Number	Component Package	Quantity	Packaging Option
8KP Series	R6/P600	250 PCS	Box

Packaging Dimensions Unit: Inches (Millimeters)	

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