

Axial Lead Transient Voltage Suppressors (TVS)

8KP Series 24 To 43 V 8000W

Description

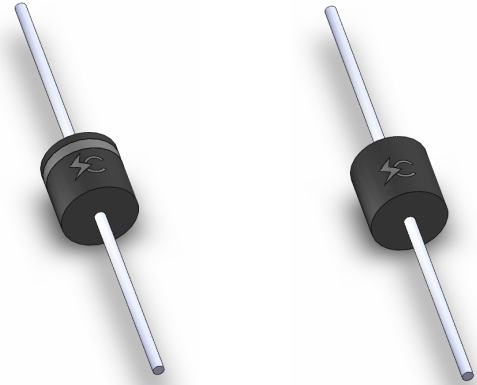
The 8KP series is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

Features

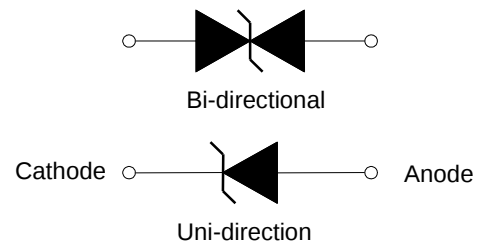
- u Glass passivated chip junction in P600 Package
- u Low leakage
- u Uni and Bidirectional unit
- u Excellent clamping capability
- u 8000W Peak power capability at 10 × 1000μs waveform Repetition rate (duty cycle):0.01%
- u Fast response time
- u RoHS compliant

Applications

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

Uni-directional
Bi-directional


Functional Diagram



Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation with a 10/1000μs waveform (Fig.1)(Note 1), (Note 2)	P _{PPM}	8000	Watts
Peak Pulse Current with a 10/1000μs waveform.(Note1, Fig.3)	I _{PP}	See Next Table	Amps
Power Dissipation on Infinite Heat Sink at T _L =75°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	°C

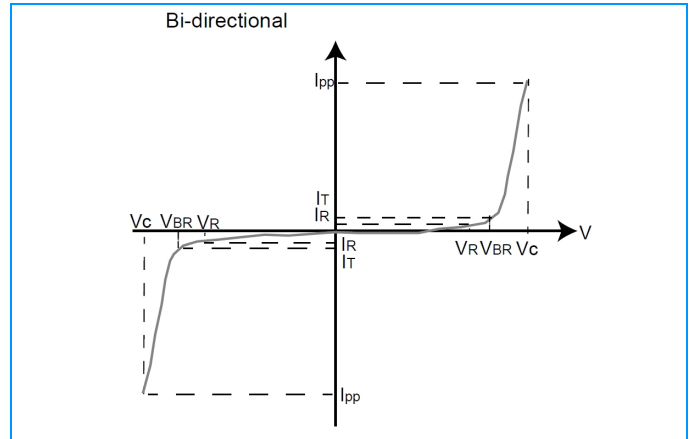
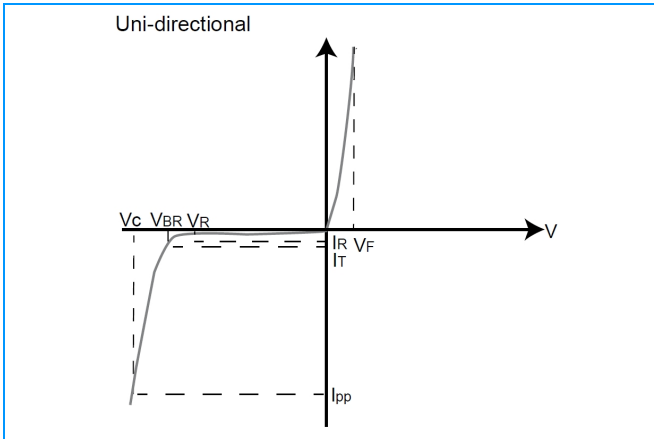
Electrical Characteristics (T_A=25°C unless otherwise noted)

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 @I _{PP} (V)	Maximum Peak Pulse Current I _{PP} (A)	Maximum Reverse Leakage I _R @V _{RWM} (μA)
Uni	Bi		MIN	MAX				
8KP24A	8KP24CA	24	26.7	29.5	1	38.9	206	5
8KP33A	8KP33CA	33	36.7	40.6	1	53.3	150	5
8KP36A	8KP36CA	36	40.0	44.2	1	58.1	148	5
8KP40A	8KP40CA	40	44.4	49.1	1	64.5	124	5
8KP43A	8KP43CA	43	47.8	52.8	1	69.4	115	5

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I-V Curve Characteristics



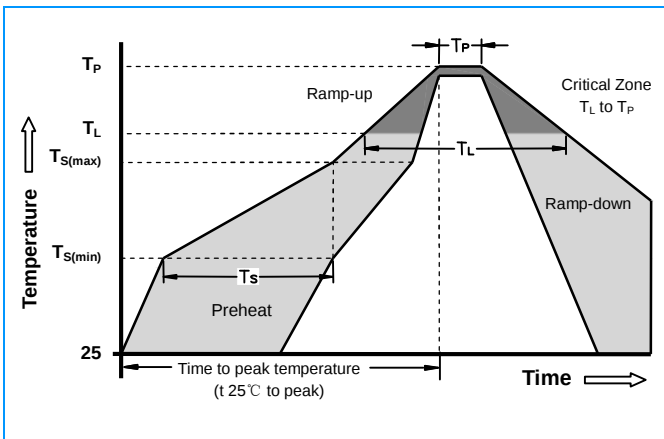
Physical Specifications

Weight	0.07 ounce, 2.1gram
Case	JEDEC R-6/P600 Molded Plastic over glass passivated junction
Polarity	Color band denotes cathode except Bipolar
Terminal	Matte Tin-plated leads, Solderable per JESD22-B102D

Environmental Specifications

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

Soldering Parameters

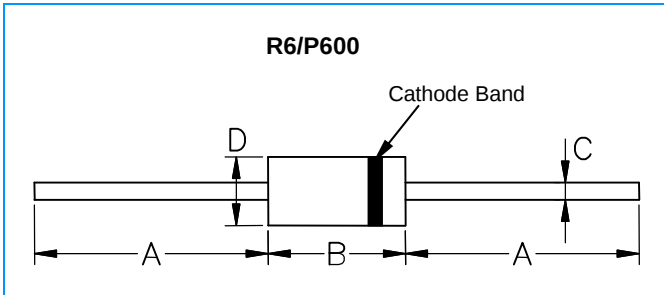


Reflow Condition		Lead-free assembly
Pre Heat	-Temperature Min ($T_{S(min)}$)	150°C
	-Temperature Max ($T_{S(max)}$)	200°C
	- Time (min to max) (T_S)	60 -180 Seconds
Average ramp up rate (Liquidus Temp T_L to peak		3°C/second max
$T_{S(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	- Temperature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

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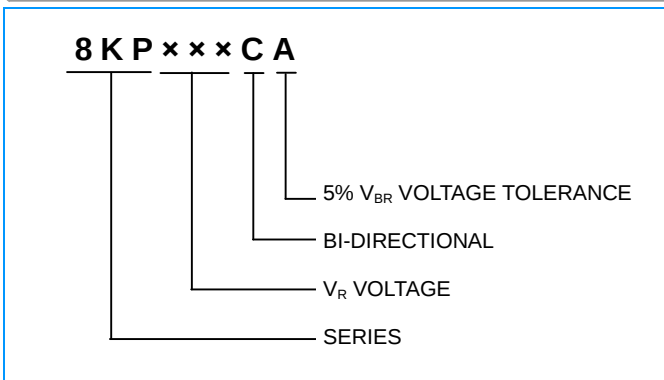
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Dimensions

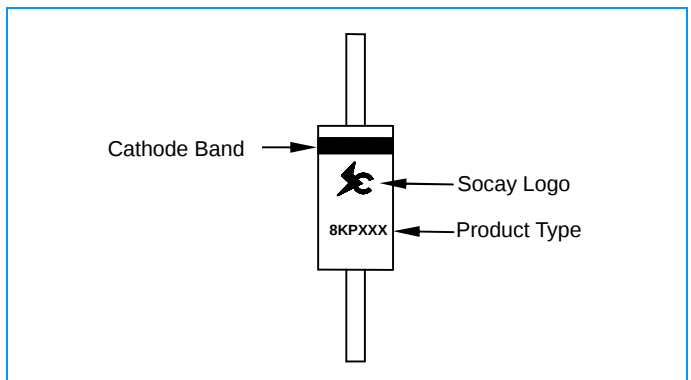


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	1.000	-	25.40	-
B	0.340	0.360	8.64	9.14
C	0.048	0.052	1.22	1.32
D	0.340	0.360	8.64	9.14

Part Numbering



Part Marking



Packaging

Part Number	Component Package	Quantity	Packaging Option
8KPXXXXX	R6/P600	250	Box

Packaging Dimensions Unit: Inches (Millimeters)

