

# 10KP-Q Series

Axial Leaded — 10000W



P600

## Additional Information



Resources



Accessories



Samples

## Maximum Ratings and Characteristics (T<sub>A</sub>=25°C)

Rating	Symbol	Value
Peak pulse power dissipation at 10/1000μs waveform(Note1, Note2, Fig.1)	P <sub>PPM</sub>	10000W
Peak pulse current of at 10/1000 μs waveform (Note 1, Fig.3)	I <sub>PPM</sub>	See Table(A)
Steady state power dissipation at T <sub>L</sub> =75°C (Fig.5)	P <sub>M(AV)</sub>	8.0W
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load, (JEDEC Method) (Note3, Fig.6)	I <sub>FSM</sub>	400A
Operating junction and Storage Temperature Ranges	T <sub>J</sub> , T <sub>STG</sub>	-55°C to +150°C
Typical thermal resistance junction to lead	R <sub>θJL</sub>	8°C/W
Typical thermal resistance junction to ambient	R <sub>θJA</sub>	40°C/W

Notes:

1. Non-repetitive current pulse, per Fig.3 and derating above T<sub>A</sub>=25°C per Fig.2.
2. 8.3ms single half sine-wave or equivalent square wave, duty cycle=4 pulses per minutes maximum.

## Description

The 10KP-Q series is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

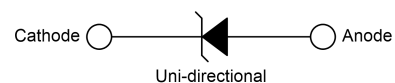
## Features

- Halogen free and RoHS compliant
- Glass passivated junction
- Low incremental surge resistance
- Excellent clamping capability
- 10000W peak pulse power capability at 10/1000μs waveform, repetition rate (duty cycle): 0.05%
- Fast response time
- Typical I<sub>R</sub> less than 3μA
- High Temperature soldering guaranteed: 265°C/10 seconds/.375", (9.5mm) lead length, 5lbs (2.3kg) tension
- Plastic package has underwriters laboratory flammability 94V-0
- Meet MSL level1, per J-STD-020
- IEC-61000-4-2 ESD 30kV(Air), 30kV (Contact)
- Unit Weight: 2.1g
- AEC-Q101 Qualified

## Applications

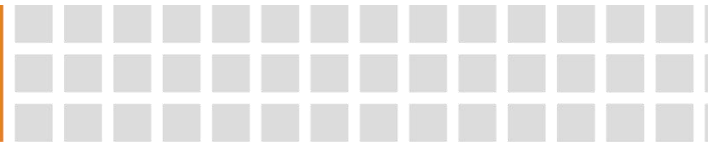
TVS components are ideal for the protection of I/O Interfaces, VCC bus and other vulnerable circuits used in telecom, computer, Industrial and consumer electronic applications.

## Functional Diagram



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## Electrical Characteristics ( $T_A=25^{\circ}\text{C}$ )

Part Number		Type	Reverse Stand-Off Voltage	Breakdown Voltage @ $I_T$		Test Current	Maximum Clamping Voltage @ $I_{PP}$	Peak Pulse Current	Reverse Leakage @ $V_R$
Uni.	Bi.		$V_R(V)$	$V_{B\ Min.}(V)$	$V_{B\ Max.}(V)$	$I_T(mA)$	$V_C(V)$	$I_{PP}(A)$	$I_R(\mu A)$
10KP22A	10KP22CA	Q	22.0	24.4	26.9	5	35.5	281.7	3
10KP24A	10KP24CA	Q	24.0	26.7	29.5	5	38.9	257.1	2
10KP26A	10KP26CA	Q	26.0	28.9	31.9	5	42.1	237.5	2
10KP28A	10KP28CA	Q	28.0	31.1	34.4	5	45.4	220.3	2
10KP30A	10KP30CA	Q	30.0	33.3	36.8	5	48.4	206.6	2
10KP33A	10KP33CA	Q	33.0	36.7	40.6	5	53.3	187.6	2
10KP36A	10KP36CA	Q	36.0	40.0	44.2	5	58.1	172.1	2
10KP40A	10KP40CA	Q	40.0	44.4	49.1	5	64.5	155	2

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## Ratings and Characteristic Curves ( $T_A=25^\circ\text{C}$ )

Figure 1. Peak Pulse Power Rating Curve

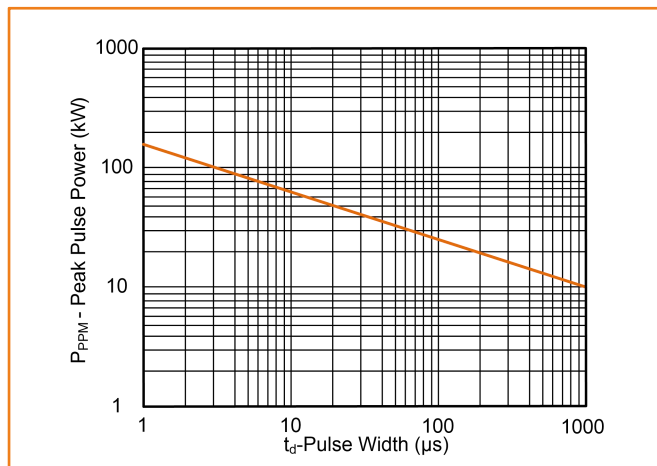


Figure 2. Pulse Derating Curve

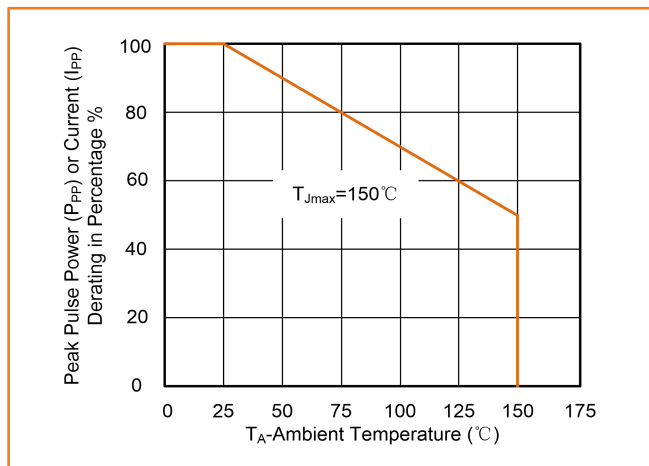


Figure 3. Pulse Waveform

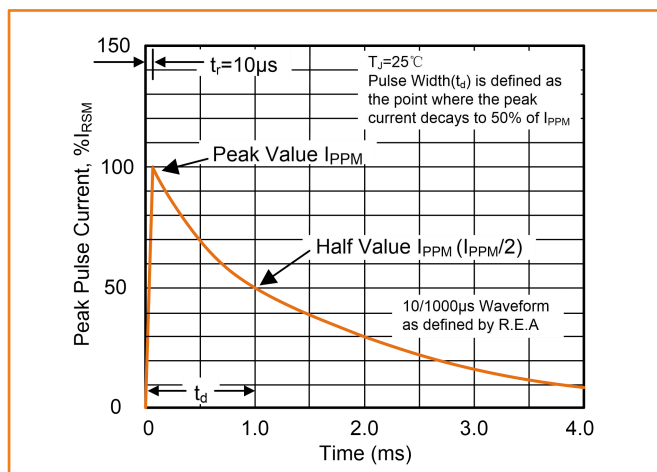


Figure 4. Typical Junction Capacitance

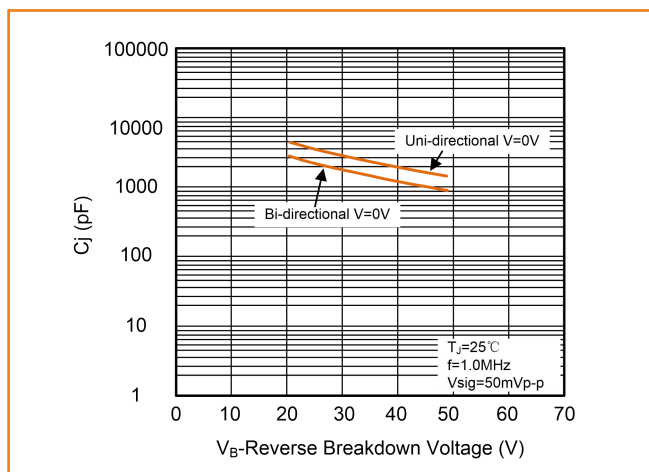


Figure 5. Steady State Power Dissipation Derating Curve

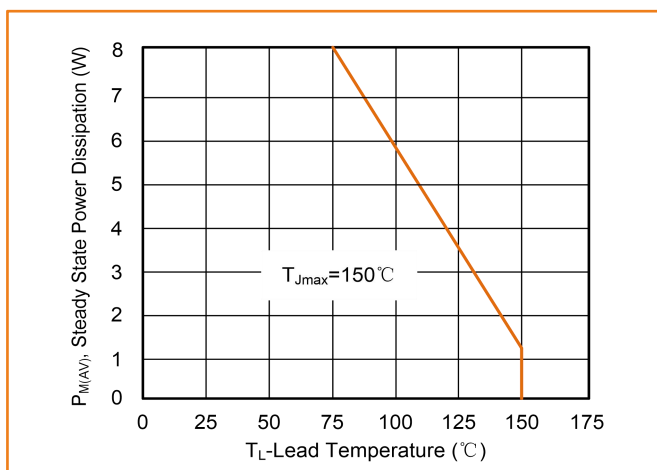
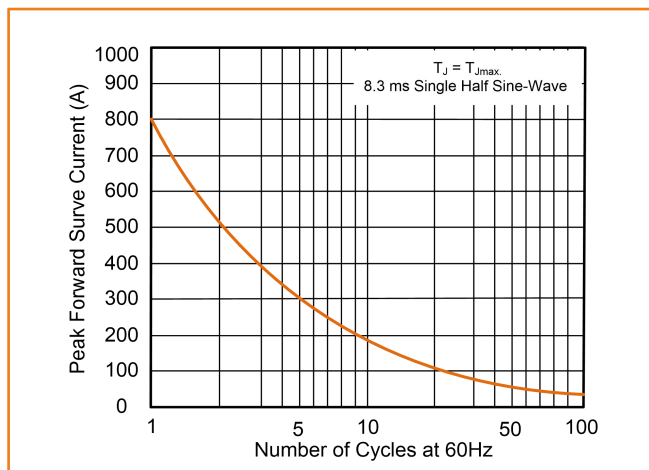


Figure 6. Maximum Non-Repetitive Forward Surge Current Uni-Directional



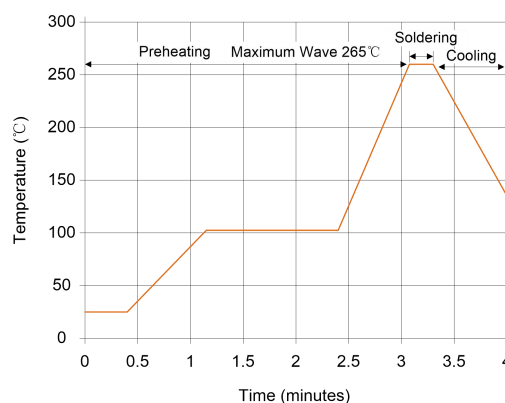
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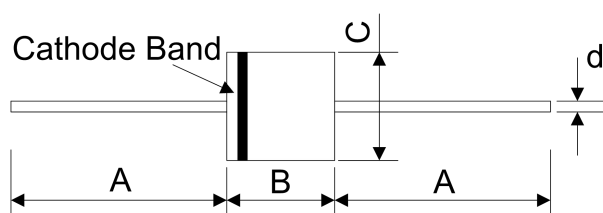
### Soldering Parameters

Peak Temperature :	265°C
Dipping Time :	10 seconds (max.)
Soldering :	1 time

#### Wave Soldering

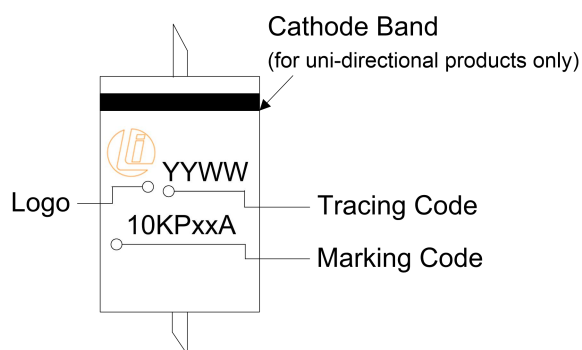
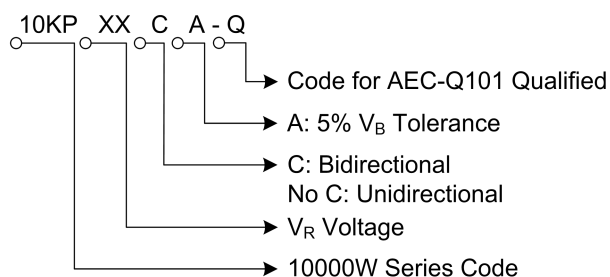


### Dimensions (P600)



Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.40	—	1.000	—
B	8.60	9.10	0.340	0.360
C	8.60	9.10	0.340	0.360
D	1.19	1.35	0.047	0.053

### Part Number Code and Marking Code

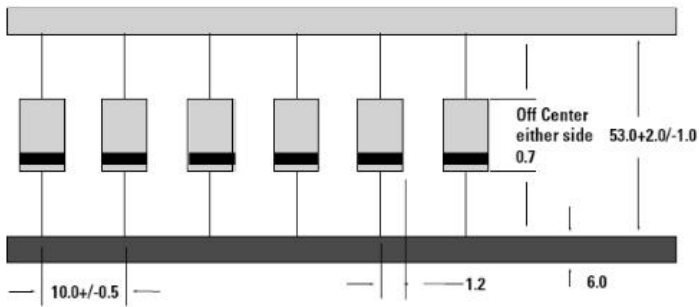


# 10KP-Q Series

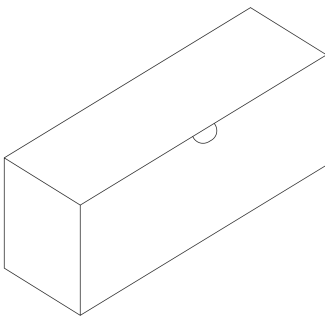
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## Packaging Specification

Tape (Unit: mm)

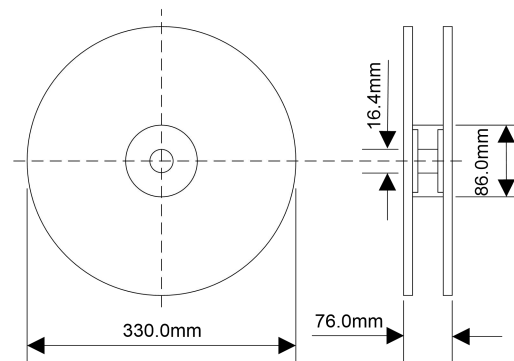


Box



Quantity: 300pcs/box

Reel



Quantity: 800pcs/reel