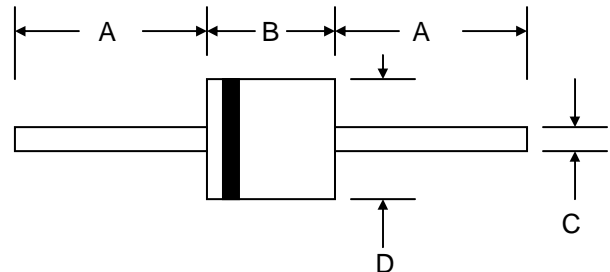


### Features

- Glass Passivated Die Construction
- 3000W Peak Pulse Power Dissipation
- 180V – 220V Standoff Voltage
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O



### Mechanical Data

- Case: P-600, Molded Plastic
- Terminals: Axial Leads, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band Except Bi-Directional
- Marking: Type Number
- Weight: 2.10 grams (approx.)
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 5**

| P-600                |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 25.4 | —    |
| B                    | 8.60 | 9.10 |
| C                    | 1.20 | 1.30 |
| D                    | 8.60 | 9.10 |
| All Dimensions in mm |      |      |

“C” Suffix Designates Bi-directional Devices  
 “A” Suffix Designates 5% Tolerance Devices  
 No Suffix Designates 10% Tolerance Devices

### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

| Characteristic   | Symbol         | Value        | Unit             |
|--|----------------|--------------|------------------|
| Peak Pulse Power Dissipation at $T_A = 25^\circ\text{C}$ (Note 1, 2, 5) Figure 3 | P PPM          | 3000 Minimum | W                |
| Peak Forward Surge Current (Note 3)  | IFSM           | 400          | A                |
| Peak Pulse Current on 10/1000 $\mu\text{S}$ Waveform (Note 1) Figure 1           | IPPM           | See Table 1  | A                |
| Steady State Power Dissipation (Note 2, 4)                                       | PM(AV)         | 8.0          | W                |
| Operating and Storage Temperature Range  | $T_j, T_{STG}$ | -55 to +175  | $^\circ\text{C}$ |

- Note: 1. Non-repetitive current pulse per Figure 1 and derated above  $T_A = 25^\circ\text{C}$  per Figure 4.  
 2. Mounted on 20mm<sup>2</sup> copper pad.  
 3. 8.3ms single half sine-wave duty cycle = 4 pulses per minutes maximum.  
 4. Lead temperature at 75 $^\circ\text{C}$ .  
 5. Peak pulse power waveform is 10/1000 $\mu\text{S}$ .

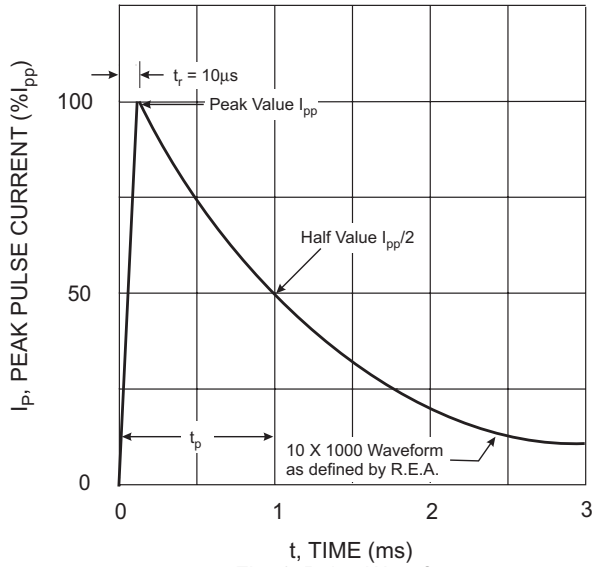


Fig. 1 Pulse Waveform

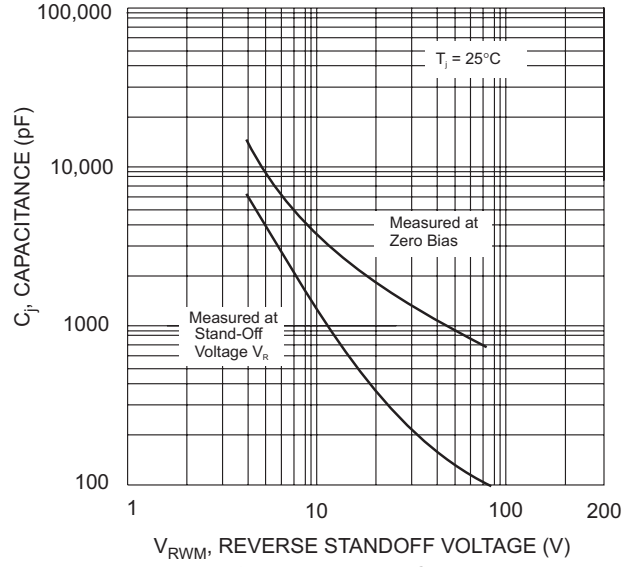


Fig. 2 Typical Junction Capacitance

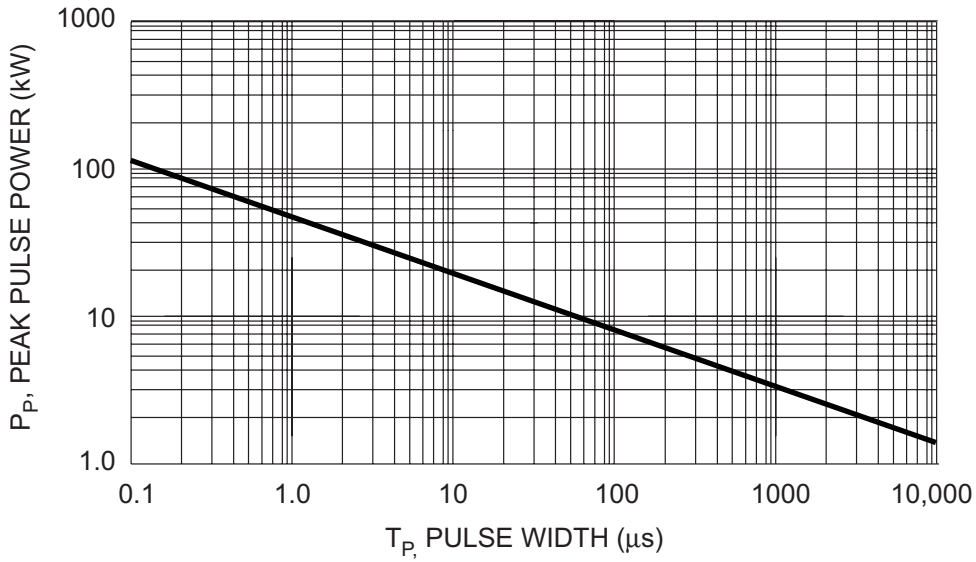


Fig. 3 Pulse Derating Curve

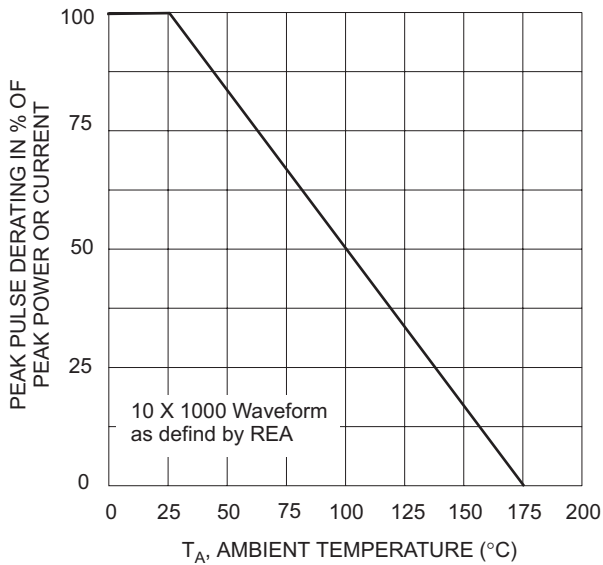


Fig. 4 Pulse Derating Curve

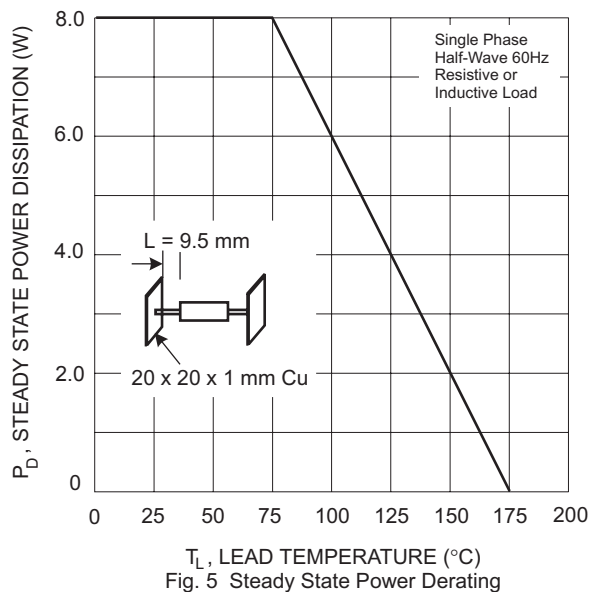


Fig. 5 Steady State Power Derating

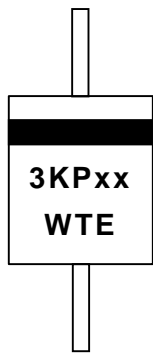
## UNI-DIRECTIONAL 3000 WATT AXIAL LEAD TVS

| UNI-DIRECTIONAL PART NUMBER | REVERSE STAND-OFF VOLTAGE VRWM (V) | BREAKDOWN VOLTAGE VBR (V) MIN. @IT | BREAKDOWN VOLTAGE VBR (V) MAX. @IT | TEST CURRENT IT (mA) | MAXIMUM CLAMPING VOLTAGE @Ipp Vc (V) | PEAK PULSE CURRENT Ipp (A) | REVERSE LEAKAGE @VRWM IR (uA) |
|-----------------------------|------------------------------------|------------------------------------|------------------------------------|----------------------|--------------------------------------|----------------------------|-------------------------------|
| 3KP180                      | 180.00                             | 198.00                             | 253.80                             | 1                    | 322.0                                | 9.3                        | 5                             |
| 3KP180A                     | 180.00                             | 198.00                             | 230.40                             | 1                    | 292.0                                | 10.3                       | 5                             |
| 3KP190                      | 190.00                             | 209.00                             | 267.90                             | 1                    | 340.0                                | 8.8                        | 5                             |
| 3KP190A                     | 190.00                             | 209.00                             | 243.20                             | 1                    | 308.0                                | 9.7                        | 5                             |
| 3KP200                      | 200.00                             | 220.00                             | 282.00                             | 1                    | 358.0                                | 8.4                        | 5                             |
| 3KP200A                     | 200.00                             | 220.00                             | 256.00                             | 1                    | 324.0                                | 9.3                        | 5                             |
| 3KP210                      | 210.00                             | 231.00                             | 296.10                             | 1                    | 376.0                                | 7.8                        | 5                             |
| 3KP210A                     | 210.00                             | 231.00                             | 268.80                             | 1                    | 340.0                                | 8.8                        | 5                             |
| 3KP220                      | 220.00                             | 242.00                             | 310.20                             | 1                    | 394.0                                | 7.6                        | 5                             |
| 3KP220A                     | 220.00                             | 242.00                             | 281.60                             | 1                    | 356.0                                | 8.4                        | 5                             |

## BI-DIRECTIONAL 3000 WATT AXIAL LEAD TVS

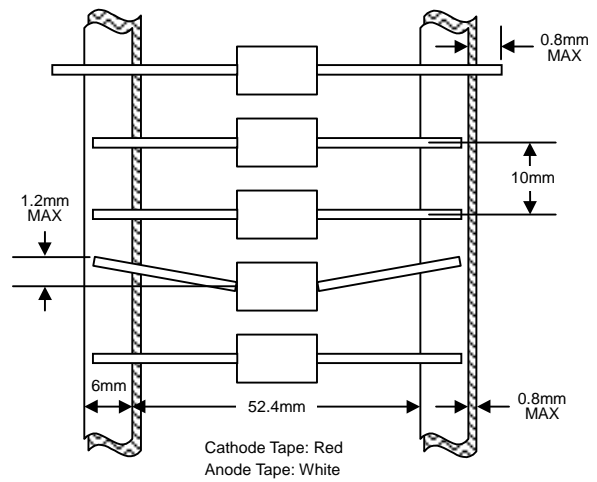
| BI-DIRECTIONAL PART NUMBER | REVERSE STAND-OFF VOLTAGE VRWM (V) | BREAKDOWN VOLTAGE VBR (V) MIN. @IT | BREAKDOWN VOLTAGE VBR (V) MAX. @IT | TEST CURRENT IT (mA) | MAXIMUM CLAMPING VOLTAGE @Ipp Vc (V) | PEAK PULSE CURRENT Ipp (A) | REVERSE LEAKAGE @VRWM IR (uA) |
|----------------------------|------------------------------------|------------------------------------|------------------------------------|----------------------|--------------------------------------|----------------------------|-------------------------------|
| 3KP180C                    | 180.00                             | 198.00                             | 253.80                             | 1                    | 322.0                                | 9.3                        | 5                             |
| 3KP180CA                   | 180.00                             | 198.00                             | 230.40                             | 1                    | 292.0                                | 10.3                       | 5                             |
| 3KP190C                    | 190.00                             | 209.00                             | 267.90                             | 1                    | 340.0                                | 8.8                        | 5                             |
| 3KP190CA                   | 190.00                             | 209.00                             | 243.20                             | 1                    | 308.0                                | 9.7                        | 5                             |
| 3KP200C                    | 200.00                             | 220.00                             | 282.00                             | 1                    | 358.0                                | 8.4                        | 5                             |
| 3KP200CA                   | 200.00                             | 220.00                             | 256.00                             | 1                    | 324.0                                | 9.3                        | 5                             |
| 3KP210C                    | 210.00                             | 231.00                             | 296.10                             | 1                    | 376.0                                | 7.8                        | 5                             |
| 3KP210CA                   | 210.00                             | 231.00                             | 268.80                             | 1                    | 340.0                                | 8.8                        | 5                             |
| 3KP220C                    | 220.00                             | 242.00                             | 310.20                             | 1                    | 394.0                                | 7.6                        | 5                             |
| 3KP220CA                   | 220.00                             | 242.00                             | 281.60                             | 1                    | 356.0                                | 8.4                        | 5                             |

## MARKING INFORMATION



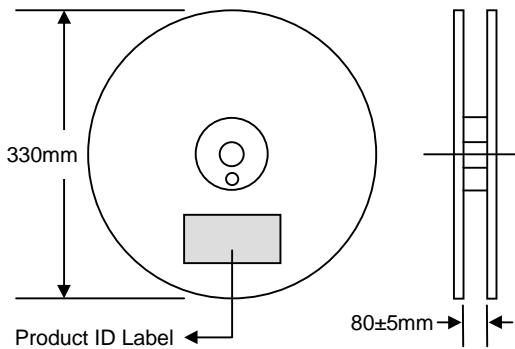
Cathode = Polarity Band Except Bi-Directional Types  
 3KPxx = Device Number  
 WTE = Manufacturer's Logo

## TAPING SPECIFICATIONS

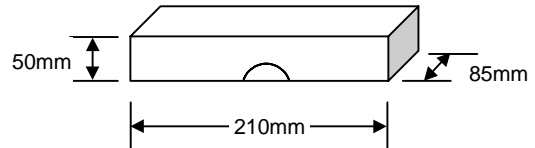


## PACKAGING INFORMATION

### TAPE & REEL



### BULK



| Packaging              | Reel Diameter / Box Size (mm) | Quantity (PCS) | Carton Size (mm) | Quantity (PCS) | Approx. Gross Weight (KG) |
|------------------------|-------------------------------|----------------|------------------|----------------|---------------------------|
| <b>TAPE &amp; REEL</b> | 330                           | 800            | 370 x 370 x 420  | 4,000          | 12.0                      |
| <b>BULK</b>            | 210 x 85 x 50                 | 250            | 500 x 255 x 275  | 7,000          | 17.0                      |

**Note:** 1. Paper reel, white or gray color. Core material: plastic or metal.  
 2. Components are packed in accordance with EIA standard RS-296-E.

## ORDERING INFORMATION

| Product No.     | Package Type | Shipping Quantity |
|-----------------|--------------|-------------------|
| <b>3KPxx-T3</b> | P-600        | 800/Tape & Reel   |
| 3KPxx           | P-600        | 250 Units/Box     |

1. Products listed in **bold** are WTE **Preferred** devices.
2. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
3. **To order RoHS / Lead Free version, add "-LF" suffix to part number above. For example, 3KP180-T3-LF.**

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**Internet:** <http://www.wontop.com>

*We power your everyday.*