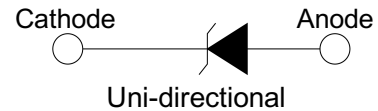
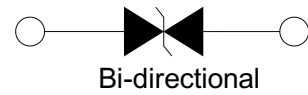
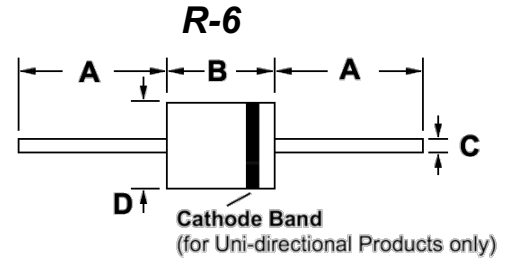




10000W Axial Leaded Transient Voltage Suppressors

Features

- Peak power dissipation 10000W @10 x 1000 us Pulse
- Low profile package.
- Excellent clamping capability.
- Glass passivated junction.
- Fast response time: typically less than 1ps from 0 Volts to BV min
- Typical I_R less than 5uA when V_{BR} min above 24V.
- IEC 61000-4-2 ESD 30KV(Air), 30KV(Contact)
- ESD protection of data lines in accordance with IEC 61000-4-2
- EFT protection of data lines in accordance with IEC 61000-4-4
- Halogen free and RoHS compliant
- Lead-free finish



Mechanical Characteristics

- CASE: R-6 Molded Plastic
- Mounting Position: Any
- Polarity: by cathode band denotes uni-directional device, none cathode band denotes bi-directional device.
- Terminal: Solder plated

| REF. | DIMENSIONS | | | |
|------|-------------|------|--------|-------|
| | Millimeters | | Inches | |
| | Min. | Max. | Min. | Max. |
| A | 25.4 | --- | 1.000 | --- |
| B | 8.6 | 9.5 | 0.34 | 0.375 |
| C | 1.2 | 1.3 | 0.048 | 0.052 |
| D | 8.6 | 9.5 | 0.340 | 0.375 |

Maximum Ratings and Characteristics @ 25°C Ambient Temperature (unless otherwise noted)

| Parameter | Symbol | Value | Units |
|---|------------------|-------------|-------|
| Peak Pulse Power Dissipation on 10/1000 us Waveform (Note 1, FIG.1) | P _{PPM} | Min 10000 | W |
| Power Dissipation on Infinite Heat Sink at T _L =75°C | P _D | 8.0 | W |
| Peak Pulse Current of on 10/1000us Waveform (Note 1, FIG.3) | I _{PPM} | See Table 1 | A |
| Peak Forward Surge Current, 8.3ms Single Half Sine-Wave (Note 2) | I _{FSM} | 400 | A |
| Operating Junction Temperature Range | T _J | -55 to 150 | °C |
| Storage Temperature Range | T _{STG} | -55 to 150 | °C |
| | | | |

Notes:

1. Non-repetitive current pulse, per Fig.3 and derated above T_A=25°C per Fig.2.
2. Measured on 8.3ms single half sine-wave, or equivalent square wave, for Unidirectional device only.

10KP Series

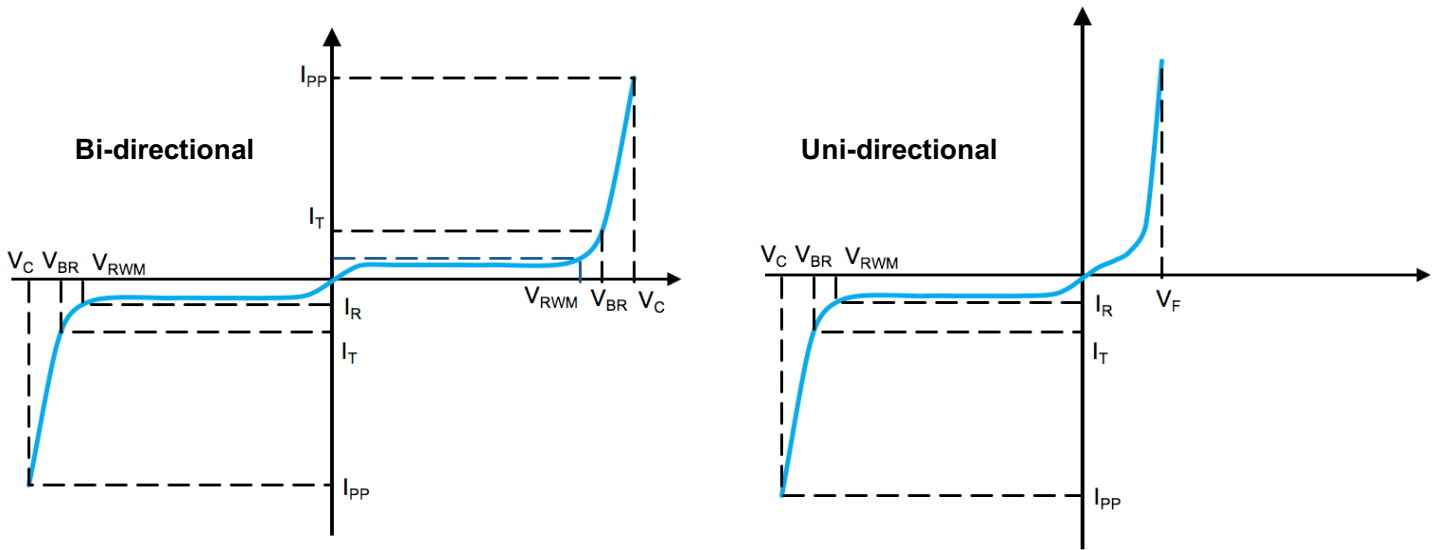
Electrical Specification (T_A=25@25°C unless otherwise specified)

| Type Number | | Reverse Stand-Off Voltage | Breakdown Voltage Min. @I _T | Breakdown Voltage Max. @ I _T | Test Current | Maximum Clamping Voltage @I _{PP} | Peak Pulse Current | Reverse Leakage @V _{RMW} |
|-------------|-----------|---------------------------|--|---|---------------------|---|---------------------|-----------------------------------|
| (Uni) | (Bi) | V _{RMW} (V) | V _{BR MIN} (V) | V _{BR MAX} (V) | I _T (mA) | V _C (V) | I _{PP} (A) | I _R (μ A) |
| 10KP17A | 10KP17CA | 17.0 | 18.90 | 20.90 | 5 | 27.6 | 365.9 | 150 |
| 10KP18A | 10KP18CA | 18.0 | 20.00 | 22.10 | 5 | 29.2 | 345.9 | 100 |
| 10KP20A | 10KP20CA | 20.0 | 22.20 | 24.50 | 5 | 32.4 | 311.7 | 50 |
| 10KP22A | 10KP22CA | 22.0 | 24.40 | 26.90 | 5 | 35.5 | 284.5 | 15 |
| 10KP24A | 10KP24CA | 24.0 | 26.70 | 29.50 | 5 | 38.9 | 259.6 | 5 |
| 10KP26A | 10KP26CA | 26.0 | 28.90 | 31.90 | 5 | 42.1 | 239.9 | 5 |
| 10KP28A | 10KP28CA | 28.0 | 31.10 | 34.40 | 5 | 45.4 | 222.5 | 5 |
| 10KP30A | 10KP30CA | 30.0 | 33.30 | 36.80 | 5 | 48.4 | 208.7 | 5 |
| 10KP33A | 10KP33CA | 33.0 | 36.70 | 40.60 | 5 | 53.3 | 189.5 | 5 |
| 10KP36A | 10KP36CA | 36.0 | 40.00 | 44.20 | 5 | 58.1 | 173.8 | 5 |
| 10KP40A | 10KP40CA | 40.0 | 44.40 | 49.10 | 5 | 64.5 | 156.6 | 5 |
| 10KP43A | 10KP43CA | 43.0 | 47.80 | 52.80 | 5 | 69.4 | 145.5 | 5 |
| 10KP45A | 10KP45CA | 45.0 | 50.00 | 55.30 | 5 | 72.7 | 138.9 | 5 |
| 10KP48A | 10KP48CA | 48.0 | 53.30 | 58.90 | 5 | 77.4 | 130.5 | 5 |
| 10KP51A | 10KP51CA | 51.0 | 56.70 | 62.70 | 5 | 82.4 | 122.6 | 5 |
| 10KP54A | 10KP54CA | 54.0 | 60.00 | 66.30 | 5 | 87.1 | 116.0 | 5 |
| 10KP58A | 10KP58CA | 58.0 | 64.40 | 71.20 | 5 | 93.6 | 107.9 | 5 |
| 10KP60A | 10KP60CA | 60.0 | 66.70 | 73.70 | 5 | 96.8 | 104.3 | 5 |
| 10KP64A | 10KP64CA | 64.0 | 71.10 | 78.60 | 5 | 103.0 | 98.1 | 5 |
| 10KP70A | 10KP70CA | 70.0 | 77.80 | 86.00 | 5 | 113.0 | 89.4 | 5 |
| 10KP75A | 10KP75CA | 75.0 | 83.30 | 92.10 | 5 | 121.0 | 83.5 | 5 |
| 10KP78A | 10KP78CA | 78.0 | 86.70 | 95.80 | 5 | 126.0 | 80.2 | 5 |
| 10KP85A | 10KP85CA | 85.0 | 94.40 | 104.00 | 5 | 137.0 | 73.7 | 5 |
| 10KP90A | 10KP90CA | 90.0 | 100.00 | 111.00 | 5 | 146.0 | 69.2 | 5 |
| 10KP100A | 10KP100CA | 100.0 | 111.00 | 123.00 | 5 | 162.0 | 62.3 | 5 |
| 10KP110A | 10KP110CA | 110.0 | 122.00 | 135.00 | 5 | 177.0 | 57.1 | 5 |
| 10KP120A | 10KP120CA | 120.0 | 133.00 | 147.00 | 5 | 193.0 | 52.3 | 5 |
| 10KP130A | 10KP130CA | 130.0 | 144.00 | 159.00 | 5 | 209.0 | 48.3 | 5 |
| 10KP150A | 10KP150CA | 150.0 | 167.00 | 185.00 | 5 | 243.0 | 41.6 | 5 |
| 10KP160A | 10KP160CA | 160.0 | 178.00 | 197.00 | 5 | 259.0 | 39.0 | 5 |
| 10KP170A | 10KP170CA | 170.0 | 189.00 | 209.00 | 5 | 275.0 | 36.7 | 5 |
| 10KP180A | 10KP180CA | 180.0 | 200.00 | 221.00 | 5 | 289.0 | 34.9 | 5 |
| 10KP190A | 10KP190CA | 190.0 | 211.00 | 233.00 | 5 | 310.0 | 32.6 | 5 |
| 10KP200A | 10KP200CA | 200.0 | 222.00 | 246.00 | 5 | 329.2 | 30.7 | 5 |
| 10KP210A | 10KP210CA | 210.0 | 233.00 | 258.00 | 5 | 349.5 | 28.9 | 5 |
| 10KP220A | 10KP220CA | 220.0 | 244.00 | 270.00 | 5 | 371.1 | 27.2 | 5 |
| 10KP250A | 10KP250CA | 250.0 | 277.00 | 306.00 | 5 | 425.0 | 23.8 | 2 |

※ For Bi-directional type having V_{RMW} of 20 Volts and less, the I_R limit is double.

※ For parts without A, the V_{BR} is \pm 10% and V_C is 5% higher than with A parts.

I-V Curve Characteristics



P_{PPM} **Peak Pulse Power Dissipation** - Max power dissipation

V_{RWM} **Reverse Stand-off Voltage** - Maximum voltage that can be applied to TVS without operation

V_{BR} **Breakdown Voltage** – Maximum voltage that flows through the TVS at a specified current (I_T)

V_C **Clamping Voltage** – Peak voltage measured across the TVS at a specified I_{PPM} (peak impulse current)

I_R **Reverse Leakage Current** – Current measured at V_R

V_F **Forward Voltage Drop for Uni-directional**

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

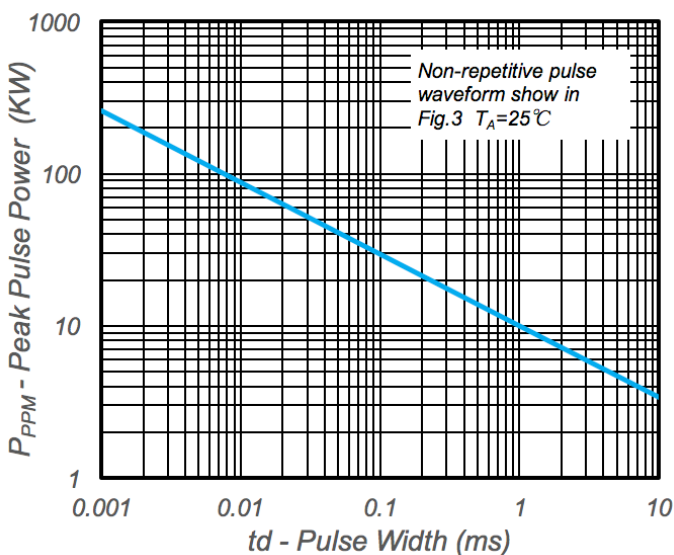


Fig.1 - Peak Pulse Power Rating

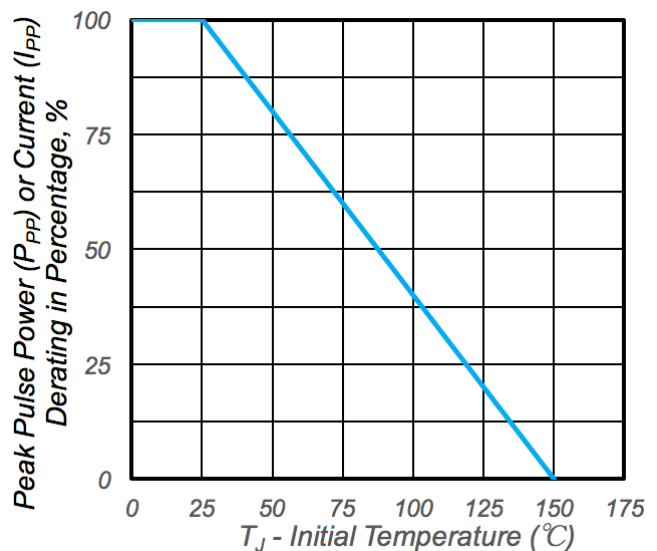


Fig.2 - Pulse Derating Curve

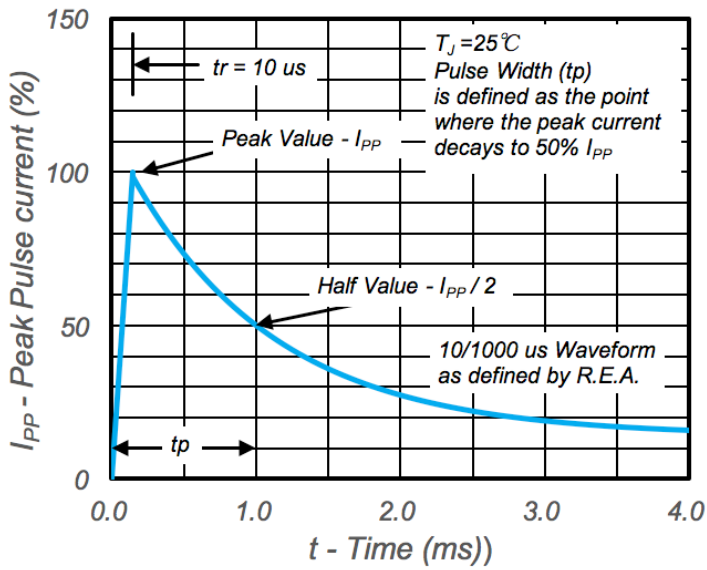


Fig.3 – Pulse Waveform

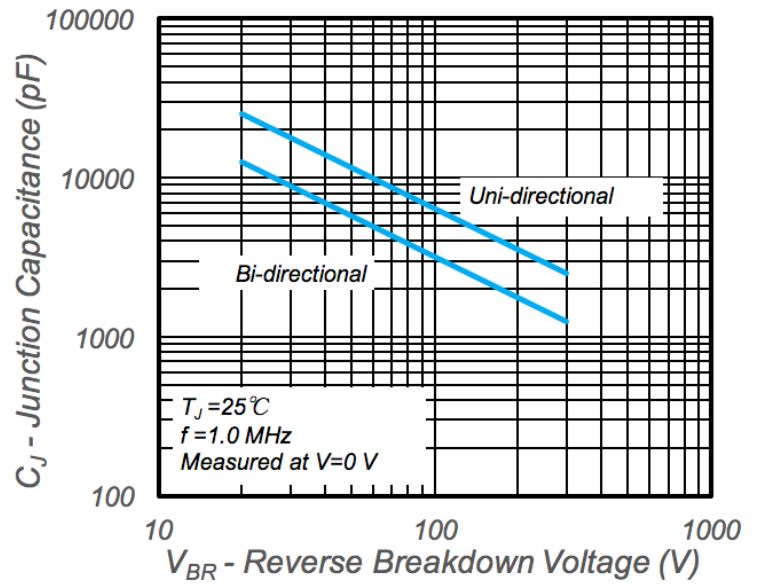
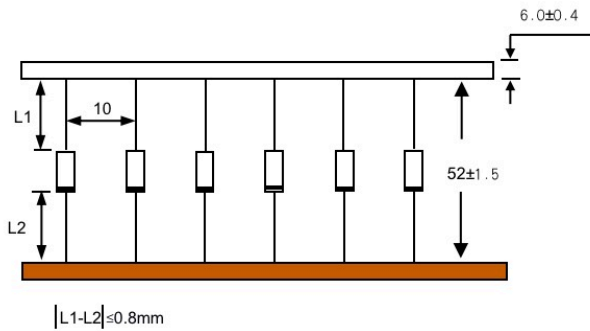
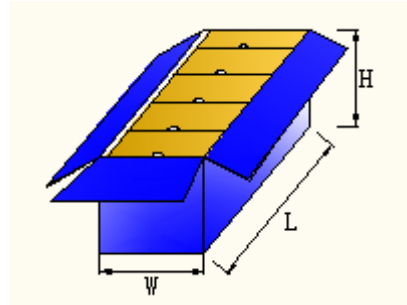
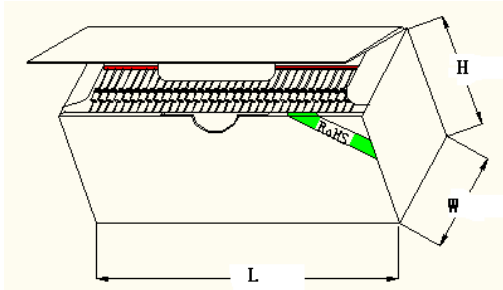


Fig.4 - Typical Junction Capacitance

Reel Dimension



Inner Box & Carton



| | Unit | L | W | H | Quantity |
|-----------|------|-----|-----|-----|----------|
| Inner Box | mm | 260 | 80 | 145 | 400pcs |
| Carton | mm | 420 | 280 | 330 | 4000pcs |