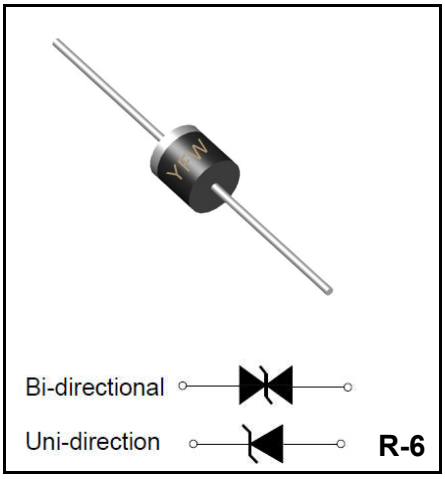
# 20000W GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

**Peak Pulse Power: 20000 W**
**Reverse Voltage: 20 V to 300 V**




## FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated junction
- 20000W Peak Pulse Power
- capability on 10/1000 μs waveform
- Excellent clamping capability
- Repetition rate (duty cycle):0.05%
- Low incremental surge resistance
- Fast response time: typically less than 1.0 ps from 0 volts to BV
- Typical Id less than 1μA above 10V
- High temperature soldering guaranteed: 265°C/10 seconds/.375", (9.5mm) lead length, 5lbs., (2.3kg) tension

## MECHANICAL DATA

- Case:Molded plastic over glass passivated junction
- Terminals: Plated Axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denoted positive end (cathode) except Bipolar
- Mounting Position: Any
- Weight: 0.07 ounce, 2.1 gram

## DEVICES FOR BIPOLAR APPLICATIONS

- For Bidirectional use C or CA Suffix for types 20KP20 thru types 20KP300 Electrical characteristics apply in both directions.

## MAXIMUM RATINGS AND CHARACTERISTICS

**Ratings at 25°C ambient temperature unless otherwise specified.**

| RATING | SYMBOL | VALUE | UNITS |
|---|---|---|---|
| Peak Pulse Power Dissipation on 10/1000 μs waveform (NOTE 1) | $P_{PPM}$ | Minimum 20000 | W |
| Peak Pulse Current of on 10-1000 μs waveform (NOTE 1) | $I_{PPM}$ | SEE TABLE 1 | A |
| Steady State Power Dissipation at Tl=75 °C Lead Lengths.375", (9.5mm)(NOTE 2) | $P_{M}(AV)$ | 8.0 | W |
| Peak Forward Surge Current, 8.3ms Sine-Wave Superimposed on Rated Load, (JEDEC Method) (NOTE 3) | $I_{FSM}$ | 400.0 | A |
| Operatings and Storage Temperature Range | $T_J$, $T_{STG}$ | -55 to +175 | °C |

**NOTES:**

1.Non-repetitive current pulse, per Fig.3 and derated above Ta=25 °C per Fig.2.
2.Mounted on Copper Pad area of 0.8x0.8" (20x20mm) per Fig.5.
3.8.3ms single half sine-wave, or equivalent square wave, Duty cycle=4 pulses per minutes maximum

## 20000 Watt TVS

| Part Number | | Reverse Stand-Off Voltage | Breakdown Voltage @IT | | Test Current | Maximum Clamping Voltage @IPP (V) | Maximum Peak Pulse Current | Maximum Reverse Leakage @VRWM |
|---|---|---|---|---|---|---|---|---|
| Uni | Bi | VRWM (V) | VBR MIN(V) | VBR MAX(V) | IT (mA) | VC(V) | IPP (A) | IR(μA) |
| 20KP20A | 20KP20CA | 20 | 22.34 | 24.38 | 50 | 36.8 | 548.9 | 5000 |
| 20KP24A | 20KP24CA | 24 | 26.81 | 29.26 | 50 | 41.2 | 490.3 | 5000 |
| 20KP26A | 20KP26CA | 26 | 29.04 | 31.26 | 50 | 22.7 | 451.9 | 2000 |
| 20KP28A | 20KP28CA | 28 | 31.28 | 34.13 | 50 | 48 | 420.8 | 1000 |
| 20KP30A | 20KP30CA | 30 | 33.51 | 36.57 | 5 | 51.5 | 392.2 | 250 |
| 20KP32A | 20KP32CA | 32 | 35.74 | 39.01 | 5 | 54.3 | 372 | 150 |
| 20KP34A | 20KP34CA | 34 | 38 | 41.4 | 5 | 57.5 | 351.3 | 50 |
| 20KP36A | 20KP36CA | 36 | 40.2 | 43.9 | 5 | 61.5 | 328.5 | 20 |
| 20KP40A | 20KP40CA | 40 | 44.7 | 48.8 | 5 | 67.8 | 297.9 | 15 |
| 20KP44A | 20KP44CA | 44 | 49.1 | 53.6 | 5 | 72.7 | 277.9 | 5 |
| 20KP48A | 20KP48CA | 48 | 53.6 | 58.5 | 5 | 79.4 | 254.4 | 5 |
| 20KP52A | 20KP52CA | 52 | 58.1 | 63.4 | 5 | 85.8 | 235.4 | 5 |
| 20KP56A | 20KP56CA | 56 | 62.6 | 68.3 | 5 | 92.6 | 218.1 | 5 |
| 20KP60A | 20KP60CA | 60 | 67 | 73.1 | 5 | 97.6 | 207 | 5 |
| 20KP64A | 20KP64CA | 64 | 71.5 | 78.0 | 5 | 104 | 194.2 | 5 |
| 20KP68A | 20KP68CA | 68 | 76 | 82.9 | 5 | 110 | 183.6 | 5 |
| 20KP72A | 20KP72CA | 72 | 80.4 | 87.8 | 5 | 116 | 174.1 | 5 |
| 20KP80A | 20KP80CA | 80 | 89.4 | 97.5 | 5 | 130 | 155.4 | 5 |
| 20KP88A | 20KP88CA | 88 | 98.3 | 107.3 | 5 | 142 | 142.3 | 5 |
| 20KP96A | 20KP96CA | 96 | 107.2 | 117.0 | 5 | 155 | 130.3 | 5 |
| 20KP104A | 20KP104CA | 104 | 116.2 | 126.8 | 5 | 168 | 120.2 | 5 |
| 20KP112A | 20KP112CA | 112 | 125.1 | 136.5 | 5 | 182 | 111 | 5 |
| 20KP120A | 20KP120CA | 120 | 134 | 146.3 | 5 | 194 | 104.1 | 5 |
| 20KP132A | 20KP132CA | 132 | 147.4 | 160.9 | 5 | 213 | 94.8 | 5 |
| 20KP144A | 20KP144CA | 144 | 160.8 | 175.5 | 5 | 232 | 87.1 | 5 |
| 20KP160A | 20KP160CA | 160 | 178.7 | 195.0 | 5 | 258 | 78.3 | 5 |
| 20KP172A | 20KP172CA | 172 | 192.1 | 209.7 | 5 | 277 | 72.9 | 5 |
| 20KP180A | 20KP180CA | 180 | 201.1 | 219.4 | 5 | 291 | 69.4 | 5 |
| 20KP192A | 20KP192CA | 192 | 214.5 | 234.0 | 5 | 309 | 65.4 | 5 |
| 20KP204A | 20KP204CA | 204 | 227.9 | 248.7 | 5 | 329 | 61.4 | 5 |
| 20KP216A | 20KP216CA | 216 | 241.3 | 263.3 | 5 | 348 | 58 | 5 |
| 20KP232A | 20KP232CA | 232 | 159.1 | 282.8 | 5 | 374 | 54 | 5 |
| 20KP240A | 20KP240CA | 240 | 268.1 | 292.6 | 5 | 387 | 52.2 | 5 |
| 20KP256A | 20KP256CA | 256 | 286 | 312.1 | 5 | 412 | 49 | 5 |
| 20KP280A | 20KP280CA | 280 | 312.8 | 341.3 | 5 | 451 | 44.8 | 5 |
| 20KP300A | 20KP300CA | 300 | 335.1 | 365.7 | 5 | 483 | 41.8 | 5 |

## Series Rating and Characteristics

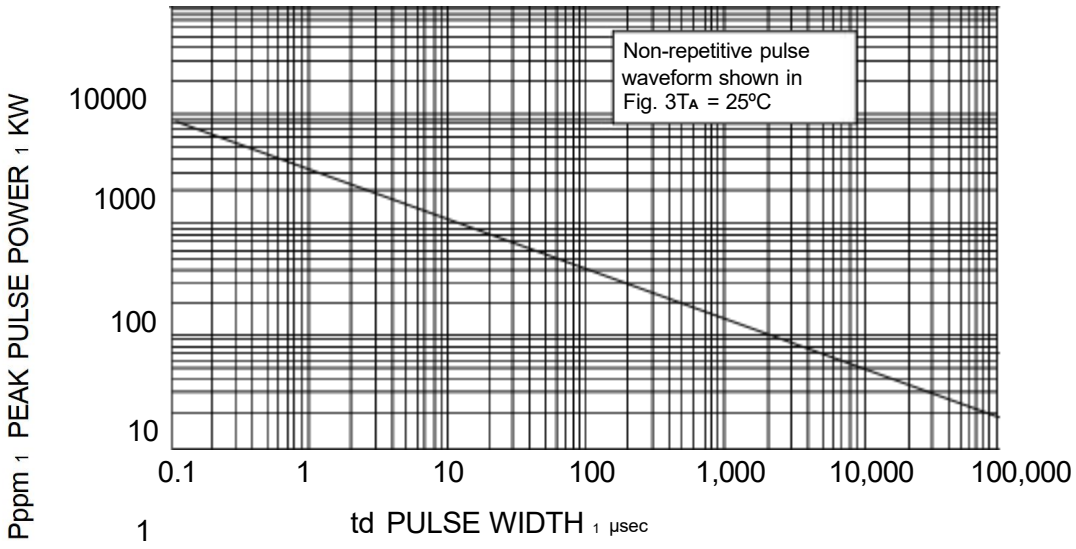



FIG. 1 PEAK PULSE POWER RATING

**Fig.2 - Pulse Derating Curve**

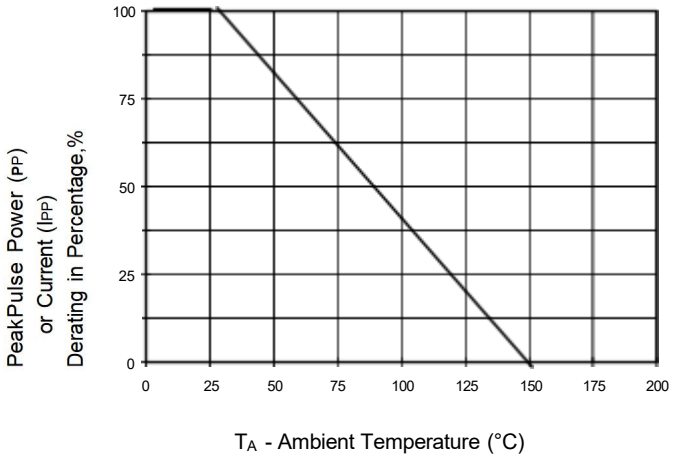
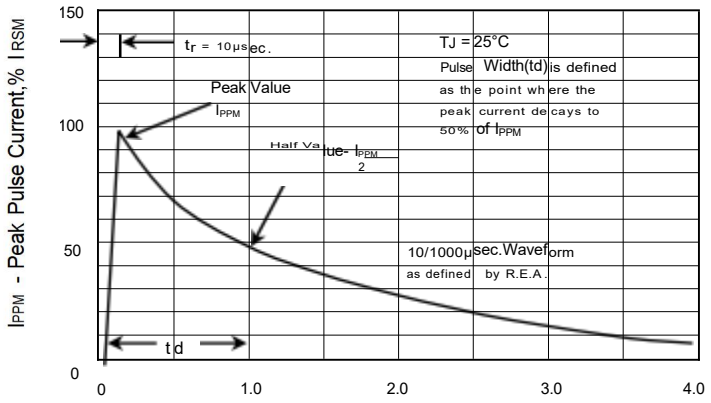



**Fig.3 - Pulse Waveform**

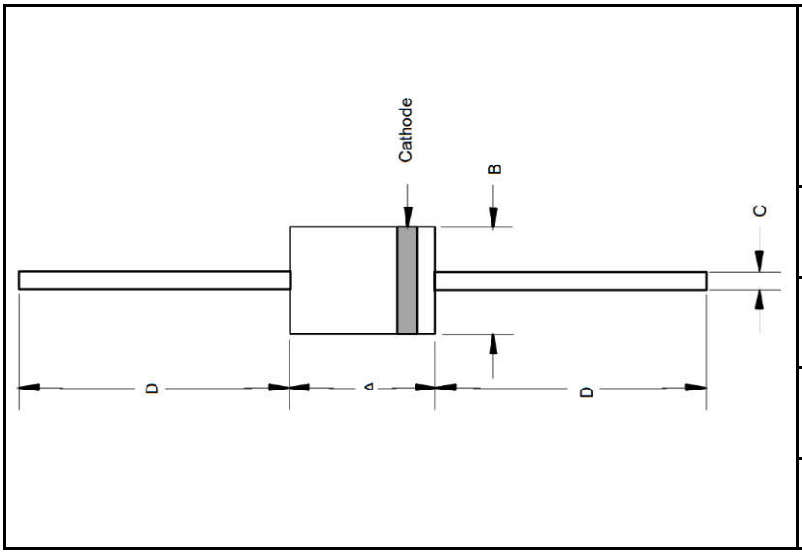


## Ordering information

| Package | Packing Description | Packing Quantity |
|---|---|---|
| **R-6** | braid | 500PCS/Box 5000PCS/Carton |

## Package Dimensions

**R-6**




| Dim. | Millimeter(mm) | | INCHES | |
|---|---|---|---|---|
| | Min. | Max. | Min. | Max. |
| A | 8.60 | 9.10 | 0.340 | 0.360 |
| B | 8.60 | 9.10 | 0.340 | 0.360 |
| C | 1.20 | 1.30 | 0.048 | 0.052 |
| D | 25.40 | - | 1.00 | - |

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