

|   |                |
|---|----------------|
|  | <b>E480232</b> |
|---|----------------|

**Features**

- Fast Response Time
- Glass Passivated Junction
- Plastic Package Devices and Low Incremental Surge Resistance
- High Temperature Soldering Guaranteed
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- For Bidirectional Devices Add "C" To The Suffix of The Part Number: i.e.30KP28CA for 5% Tolerance

**Mechanical Data**

- Polarity :Color Band Denotes Cathodes Except Bipolar
- Weight: 0.07 ounce, 2.5 grams
- Terminals: Plated Axial leads, Solderable Per MIL-STD-750, Methode 2026

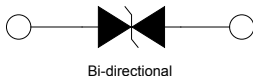
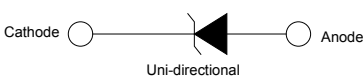
**Maximum Ratings**

- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C

|  |  |              |   |
|--|--|--------------|---|
| Peak Pulse Power Dissipation with a 10/1000µs Waveform | $P_{PPM}$                                    | 30000W(Min.) |   |
| Steady State Power Dissipation                         | $P_{M(AV)}$                                  | 8.0 W        | $T_L=75^\circ\text{C}$ , Lead lengths.375", (9.5mm) |
| Response Time  | typically less than 1.0ps from 0 Volts to BV |              |   |
|  | bidirectional less than 10ns                 |              |   |

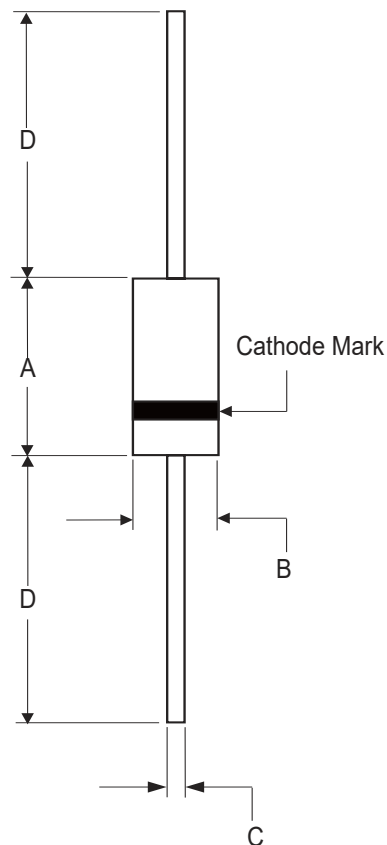
Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7a.

Pin Configuration:



**30000Watts TVS  
28 to 288 Volts**

R-6



| DIM | INCHES |       | MM    |       | NOTE |
|-----|--------|-------|-------|-------|------|
|     | MIN    | MAX   | MIN   | MAX   |      |
| A   | 0.340  | 0.360 | 8.60  | 9.10  |      |
| B   | 0.340  | 0.360 | 8.60  | 9.10  |      |
| C   | 0.048  | 0.052 | 1.20  | 1.32  |      |
| D   | 1.000  | ----- | 25.40 | ----- |      |

**Electrical Characteristics @ 25°C Unless Otherwise Specified**

| PART NUMBER |           | REVERSE<br>STAND- OFF<br>VOLTAGE<br>$V_{RWM}(V)$ | BREAKDOWN<br>VOLTAGE $V_{BR}(V)$<br>MIN. @ $I_T$ | BREAKDOWN<br>VOLTAGE $V_{BR}(V)$<br>MAX. @ $I_T$ | TEST<br>CURRENT<br>$I_T$ (mA) | PEAK<br>PULSE<br>CURRENT<br>$I_{PP}$ (A) | REVERSE<br>LEAKAGE<br>@ $V_{RWM}$<br>$I_R(\mu A)$ | MAXIMUM<br>CLAMPING<br>VOLTAGE@ $I_{PP}$<br>$V_C(V)$ |
|-------------|-----------|--|--|--|-------------------------------|--|---|--|
| UNI-POLAR   | BI-POLAR  |  |  |  |                               |  |   |  |
| 30KP28A     | 30KP28CA  | 28   | 31.28  | 34.24  | 50                            | 606                                      | 5000  | 50   |
| 30KP30A     | 30KP30CA  | 30   | 33.51  | 36.69  | 50                            | 548.9                                    | 5000  | 55.2   |
| 30KP33A     | 30KP33CA  | 33   | 36.9   | 40.4   | 50                            | 517.9                                    | 5000  | 58.5   |
| 30KP36A     | 30KP36CA  | 36   | 40.2   | 44   | 50                            | 490.3                                    | 5000  | 61.8   |
| 30KP39A     | 30KP39CA  | 39   | 43.6   | 47.7   | 20                            | 450.9                                    | 2000  | 67.2   |
| 30KP42A     | 30KP42CA  | 42   | 46.9   | 51.4   | 10                            | 420.8                                    | 1000  | 72   |
| 30KP43A     | 30KP43CA  | 43   | 48   | 52.6   | 10                            | 415.1                                    | 1000  | 73   |
| 30KP45A     | 30KP45CA  | 45   | 50.3   | 55   | 5                             | 391.5                                    | 250   | 77.4   |
| 30KP48A     | 30KP48CA  | 48   | 53.6   | 58.7   | 5                             | 371.3                                    | 150   | 81.6   |
| 30KP51A     | 30KP51CA  | 51   | 57   | 62.4   | 5                             | 350.7                                    | 50  | 86.4   |
| 30KP54A     | 30KP54CA  | 54   | 60.3   | 66   | 5                             | 331.5                                    | 20  | 91.4   |
| 30KP58A     | 30KP58CA  | 58   | 64.8   | 70.9   | 5                             | 327.9                                    | 20  | 92.4   |
| 30KP60A     | 30KP60CA  | 60   | 67   | 73.4   | 5                             | 297.1                                    | 15  | 102  |
| 30KP64A     | 30KP64CA  | 64   | 71.5   | 78.3   | 5                             | 291.3                                    | 10  | 104  |
| 30KP66A     | 30KP66CA  | 66   | 73.7   | 80.7   | 5                             | 283.2                                    | 10  | 107  |
| 30KP70A     | 30KP70CA  | 70   | 78.2   | 85.6   | 5                             | 278                                      | 10  | 109  |
| 30KP71A     | 30KP71CA  | 71   | 79.3   | 86.8   | 5                             | 271.7                                    | 10  | 111.5  |
| 30KP72A     | 30KP72CA  | 72   | 80.4   | 88.1   | 5                             | 265.8                                    | 10  | 114  |
| 30KP75A     | 30KP75CA  | 75   | 83.8   | 91.7   | 5                             | 253.8                                    | 10  | 119.4  |
| 30KP78A     | 30KP78CA  | 78   | 87.1   | 95.4   | 5                             | 234.9                                    | 10  | 129  |
| 30KP84A     | 30KP84CA  | 84   | 93.8   | 102.7  | 5                             | 217.7                                    | 10  | 139.2  |
| 30KP90A     | 30KP90CA  | 90   | 100.5  | 110.1  | 5                             | 207                                      | 10  | 146.4  |
| 30KP96A     | 30KP96CA  | 96   | 107.2  | 117.4  | 5                             | 194.2                                    | 10  | 156  |
| 30KP102A    | 30KP102CA | 102  | 113.9  | 124.7  | 5                             | 183                                      | 10  | 165.6  |
| 30KP108A    | 30KP108CA | 108  | 120.6  | 132.1  | 5                             | 172.9                                    | 10  | 175.2  |
| 30KP120A    | 30KP120CA | 120  | 134  | 146.8  | 5                             | 155.9                                    | 10  | 194.4  |
| 30KP132A    | 30KP132CA | 132  | 147.4  | 161.4  | 5                             | 142.3                                    | 10  | 213  |
| 30KP144A    | 30KP144CA | 144  | 160.8  | 176.1  | 5                             | 135.8                                    | 10  | 223.2  |
| 30KP150A    | 30KP150CA | 150  | 167.6  | 183.5  | 5                             | 129.8                                    | 10  | 233.4  |
| 30KP156A    | 30KP156CA | 156  | 174.3  | 190.8  | 5                             | 123.7                                    | 10  | 245  |
| 30KP160A    | 30KP160CA | 160  | 178.7  | 195.7  | 5                             | 120                                      | 10  | 252.6  |
| 30KP168A    | 30KP168CA | 168  | 187.7  | 205.5  | 5                             | 111.2                                    | 10  | 272.4  |
| 30KP170A    | 30KP170CA | 170  | 189.9  | 207.9  | 5                             | 110.2                                    | 10  | 275  |
| 30KP180A    | 30KP180CA | 180  | 201.1  | 220.1  | 5                             | 104.3                                    | 10  | 290.4  |
| 30KP198A    | 30KP198CA | 198  | 221.2  | 242.2  | 5                             | 94.7                                     | 10  | 319.8  |
| 30KP216A    | 30KP216CA | 216  | 241.3  | 264.2  | 5                             | 86.9                                     | 10  | 348.6  |
| 30KP240A    | 30KP240CA | 240  | 268.1  | 293.5  | 5                             | 78.3                                     | 10  | 387  |
| 30KP258A    | 30KP258CA | 258  | 288.2  | 315.5  | 5                             | 72.8                                     | 10  | 416.4  |
| 30KP260A    | 30KP260CA | 260  | 290.4  | 318  | 5                             | 72.8                                     | 10  | 416  |
| 30KP270A    | 30KP270CA | 270  | 301.6  | 330.2  | 5                             | 69.5                                     | 10  | 436.2  |
| 30KP280A    | 30KP280CA | 280  | 312.8  | 342.4  | 5                             | 65.3                                     | 10  | 464  |
| 30KP288A    | 30KP288CA | 288  | 321.7  | 352.2  | 5                             | 64.5                                     | 10  | 469.9  |

For bi-directional type having  $V_{RWM}$  of 60 volts and less , the  $I_R$  limit is double.  
 For parts without A , the  $V_{BR}$  is  $\pm 10\%$

**Curve Characteristics**

Fig. 1 - Peak Pulse Power Rating Curve

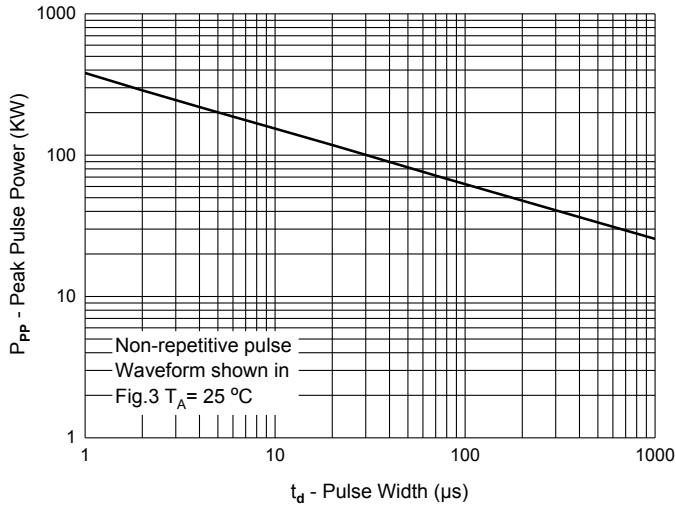


Fig. 2 - Typical Junction Capacitance

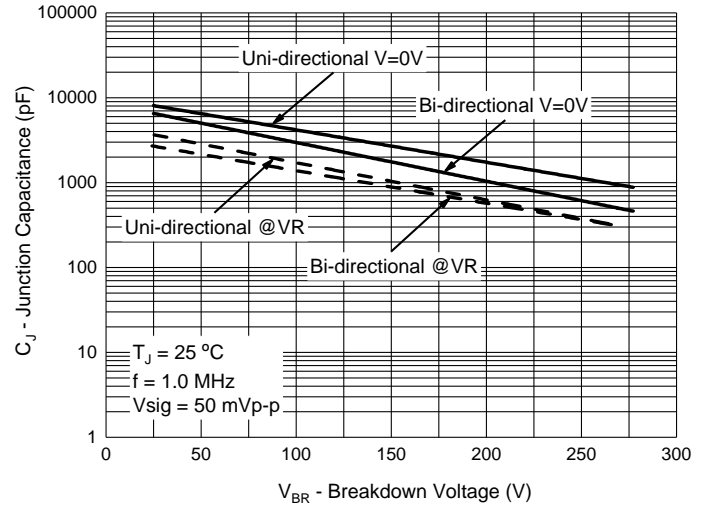


Fig. 3 - Pulse Waveform

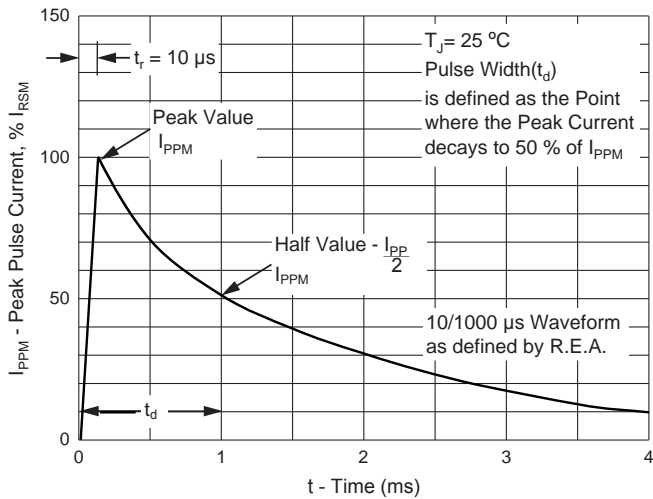
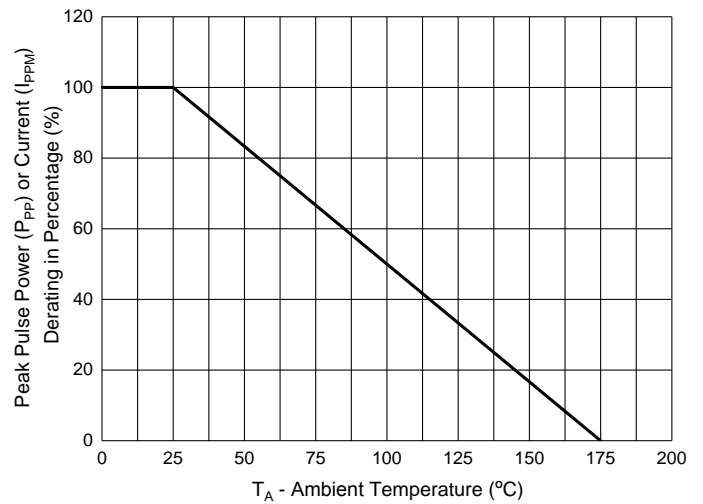


Fig. 4 - Pulse Derating Curve



## Ordering Information

| Device           | Packing                       |
|------------------|-------------------------------|
| (Part Number)-TP | Tape&Reel: 500pcs/Reel        |
| (Part Number)-AP | Ammo Packing: 450pcs/Ammo Box |
| (Part Number)-BP | Bulk: 4.8Kpcs/Carton          |

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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