


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

**Features**

- Low Inductance
- For Bidirectional Devices Add "C" To The Suffix of
- The Part Number: i.e.3KP5.0CA
- Suffix "C" of Part Number Denotes Bi-directional Unit.
- 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)

**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 | $P_{PPM}$   | 3000W (Min.) | (Note 2, FIG.1)   |
| Steady State Power Dissipation                         | $P_{M(AV)}$ | 6.5 W        | $T_L=75^\circ C$ , Lead lengths .375", (9.5mm) (Note 3) |

Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7a.  
 2. Non-repetitive current pulse, per Fig.3 and derated above  $T_A=25^\circ C$  per Fig.4  
 3. Mounted on Copper Pad area of 1.6x1.6" (40x40mm) per

**Device Marking:**

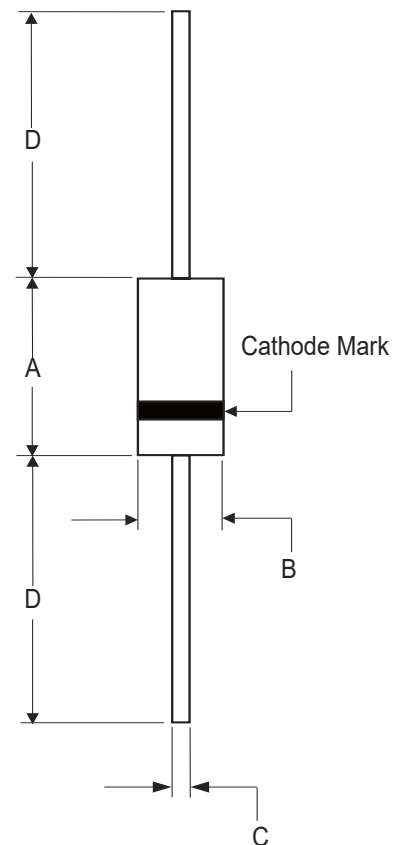
Unidirectional - Type Number and Cathode Band  
 Bidirectional - Type Number Only

**Pin Configuration**



**3000Watts TVS  
5.0 to 220 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 | ----- |      |

| MCC PART NUMBER |          | REVERSE STAND-OFF VOLTAGE $V_{RWM}(V)$ | BREAKDOWN VOLTAGE $V_{BR}(V)$ MIN.@ $I_T$ | BREAKDOWN VOLTAGE $V_{BR}(V)$ MAX.@ $I_T$ | TEST CURRENT $I_T$ (mA) | MAXIMUM CLAMPING VOLTAGE @ $I_{pp}$ $V_c(V)$ | PEAK PULSE CURRENT $I_{pp}$ (A) | REVERSE LEAKAGE @ $V_{RWM}$ $I_R$ ( $\mu A$ ) |
|-----------------|----------|--|---|---|-------------------------|--|---------------------------------|---|
| UNI-POLAR       | BI-POLAR |  |   |   |                         |  |                                 |   |
| 3KP5.0A         | 3KP5.0CA | 5.0                                    | 6.40                                      | 7.00                                      | 50                      | 9.2  | 326.1                           | 5000  |
| 3KP6.0A         | 3KP6.0CA | 6.0                                    | 6.67                                      | 7.37                                      | 50                      | 10.3   | 291.3                           | 5000  |
| 3KP6.5A         | 3KP6.5CA | 6.5                                    | 7.22                                      | 7.98                                      | 50                      | 11.2   | 267.9                           | 2000  |
| 3KP7.0A         | 3KP7.0CA | 7.0                                    | 7.78                                      | 8.60                                      | 50                      | 12.0   | 250.0                           | 1000  |
| 3KP7.5A         | 3KP7.5CA | 7.5                                    | 8.33                                      | 9.21                                      | 5                       | 12.9   | 232.6                           | 250   |
| 3KP8.0A         | 3KP8.0CA | 8.0                                    | 8.89                                      | 9.83                                      | 5                       | 13.6   | 220.6                           | 150   |
| 3KP8.5A         | 3KP8.5CA | 8.5                                    | 9.44                                      | 10.40                                     | 5                       | 14.4   | 208.3                           | 50  |
| 3KP9.0A         | 3KP9.0CA | 9.0                                    | 10.00                                     | 11.10                                     | 5                       | 15.4   | 194.8                           | 20  |
| 3KP10A          | 3KP10CA  | 10.0                                   | 11.10                                     | 12.30                                     | 5                       | 17.0   | 176.5                           | 15  |
| 3KP11A          | 3KP11CA  | 11.0                                   | 12.20                                     | 13.50                                     | 5                       | 18.2   | 164.8                           | 10  |
| 3KP12A          | 3KP12CA  | 12.0                                   | 13.30                                     | 14.70                                     | 5                       | 19.9   | 150.8                           | 10  |
| 3KP13A          | 3KP13CA  | 13.0                                   | 14.40                                     | 15.90                                     | 5                       | 21.5   | 139.5                           | 10  |
| 3KP14A          | 3KP14CA  | 14.0                                   | 15.60                                     | 17.20                                     | 5                       | 23.2   | 129.3                           | 10  |
| 3KP15A          | 3KP15CA  | 15.0                                   | 16.70                                     | 18.50                                     | 5                       | 24.4   | 123.0                           | 10  |
| 3KP16A          | 3KP16CA  | 16.0                                   | 17.80                                     | 19.70                                     | 5                       | 26.0   | 115.4                           | 10  |
| 3KP17A          | 3KP17CA  | 17.0                                   | 18.90                                     | 20.90                                     | 5                       | 27.6   | 108.7                           | 10  |
| 3KP18A          | 3KP18CA  | 18.0                                   | 20.00                                     | 22.10                                     | 5                       | 29.2   | 102.7                           | 10  |
| 3KP20A          | 3KP20CA  | 20.0                                   | 22.20                                     | 24.50                                     | 5                       | 32.4   | 92.6                            | 10  |
| 3KP22A          | 3KP22CA  | 22.0                                   | 24.40                                     | 26.90                                     | 5                       | 35.5   | 84.5                            | 10  |
| 3KP24A          | 3KP24CA  | 24.0                                   | 26.70                                     | 29.50                                     | 5                       | 38.9   | 77.1                            | 10  |
| 3KP26A          | 3KP26CA  | 26.0                                   | 28.90                                     | 31.90                                     | 5                       | 42.1   | 71.3                            | 10  |
| 3KP28A          | 3KP28CA  | 28.0                                   | 31.10                                     | 34.40                                     | 5                       | 45.4   | 66.1                            | 10  |
| 3KP30A          | 3KP30CA  | 30.0                                   | 33.30                                     | 36.80                                     | 5                       | 48.4   | 62.0                            | 10  |
| 3KP33A          | 3KP33CA  | 33.0                                   | 36.70                                     | 40.60                                     | 5                       | 53.3   | 56.3                            | 10  |
| 3KP36A          | 3KP36CA  | 36.0                                   | 40.00                                     | 44.20                                     | 5                       | 58.1   | 51.6                            | 10  |
| 3KP40A          | 3KP40CA  | 40.0                                   | 44.40                                     | 49.10                                     | 5                       | 64.5   | 46.5                            | 10  |
| 3KP43A          | 3KP43CA  | 43.0                                   | 47.80                                     | 52.80                                     | 5                       | 69.4   | 43.2                            | 10  |
| 3KP45A          | 3KP45CA  | 45.0                                   | 50.00                                     | 55.30                                     | 5                       | 72.7   | 41.3                            | 10  |
| 3KP48A          | 3KP48CA  | 48.0                                   | 53.30                                     | 58.90                                     | 5                       | 77.4   | 38.8                            | 10  |
| 3KP51A          | 3KP51CA  | 51.0                                   | 56.70                                     | 62.70                                     | 5                       | 82.4   | 36.4                            | 10  |
| 3KP54A          | 3KP54CA  | 54.0                                   | 60.00                                     | 66.30                                     | 5                       | 87.1   | 34.4                            | 10  |
| 3KP58A          | 3KP58CA  | 58.0                                   | 64.40                                     | 71.20                                     | 5                       | 93.6   | 32.1                            | 10  |
| 3KP60A          | 3KP60CA  | 60.0                                   | 66.70                                     | 73.70                                     | 5                       | 96.8   | 31.0                            | 10  |
| 3KP64A          | 3KP64CA  | 64.0                                   | 71.10                                     | 78.60                                     | 5                       | 103.0  | 29.1                            | 10  |
| 3KP70A          | 3KP70CA  | 70.0                                   | 77.80                                     | 86.00                                     | 5                       | 113.0  | 26.5                            | 10  |
| 3KP75A          | 3KP75CA  | 75.0                                   | 83.30                                     | 92.10                                     | 5                       | 121.0  | 24.8                            | 10  |
| 3KP78A          | 3KP78CA  | 78.0                                   | 86.70                                     | 95.80                                     | 5                       | 126.0  | 23.8                            | 10  |
| 3KP85A          | 3KP85CA  | 85.0                                   | 94.40                                     | 104.00                                    | 5                       | 137.0  | 21.9                            | 10  |
| 3KP90A          | 3KP90CA  | 90.0                                   | 100.00                                    | 111.00                                    | 5                       | 146.0  | 20.5                            | 10  |
| 3KP100A         | 3KP100CA | 100.0                                  | 111.00                                    | 123.00                                    | 5                       | 162.0  | 18.5                            | 10  |
| 3KP110A         | 3KP110CA | 110.0                                  | 122.00                                    | 135.00                                    | 5                       | 177.0  | 16.9                            | 10  |
| 3KP120A         | 3KP120CA | 120.0                                  | 133.00                                    | 147.00                                    | 5                       | 193.0  | 15.5                            | 10  |
| 3KP130A         | 3KP130CA | 130.0                                  | 144.00                                    | 159.00                                    | 5                       | 209.0  | 14.4                            | 10  |
| 3KP150A         | 3KP150CA | 150.0                                  | 167.00                                    | 185.00                                    | 5                       | 243.0  | 12.3                            | 10  |
| 3KP160A         | 3KP160CA | 160.0                                  | 178.00                                    | 197.00                                    | 5                       | 259.0  | 11.6                            | 10  |
| 3KP170A         | 3KP170CA | 170.0                                  | 189.00                                    | 209.00                                    | 5                       | 275.0  | 10.9                            | 10  |
| 3KP180A         | 3KP180CA | 180.0                                  | 200.00                                    | 221.00                                    | 5                       | 289.0  | 10.4                            | 10  |
| 3KP190A         | 3KP190CA | 190.0                                  | 211.00                                    | 233.00                                    | 5                       | 310.0  | 9.7                             | 10  |
| 3KP200A         | 3KP200CA | 200.0                                  | 222.00                                    | 246.00                                    | 5                       | 329.2  | 9.1                             | 10  |
| 3KP210A         | 3KP210CA | 210.0                                  | 233.00                                    | 258.00                                    | 5                       | 349.5  | 8.6                             | 10  |
| 3KP220A         | 3KP220CA | 220.0                                  | 244.00                                    | 270.00                                    | 5                       | 371.1  | 8.1                             | 10  |

For bidirectional type having  $V_{RWM}$  of 10 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

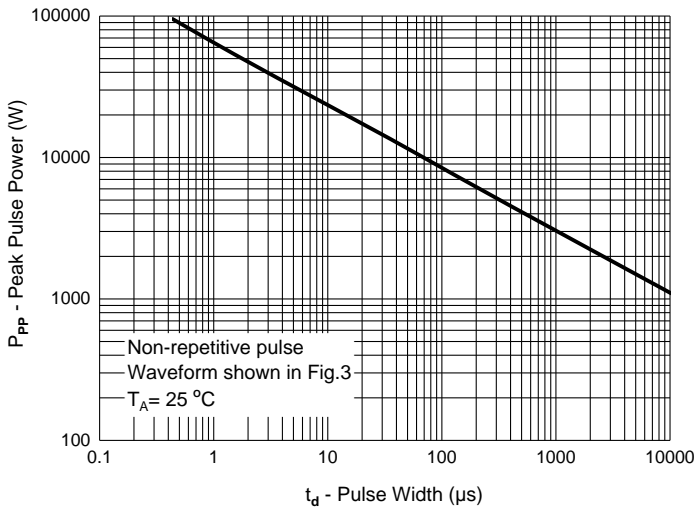


Fig. 2 - Typical Junction Capacitance

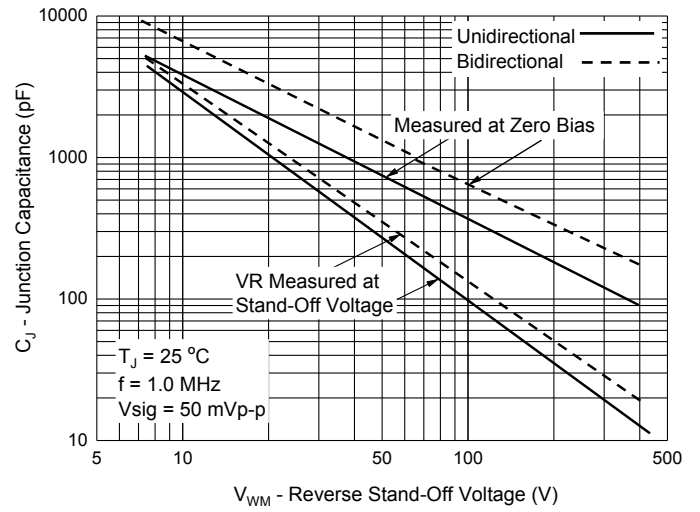


Fig. 3 - Pulse Waveform

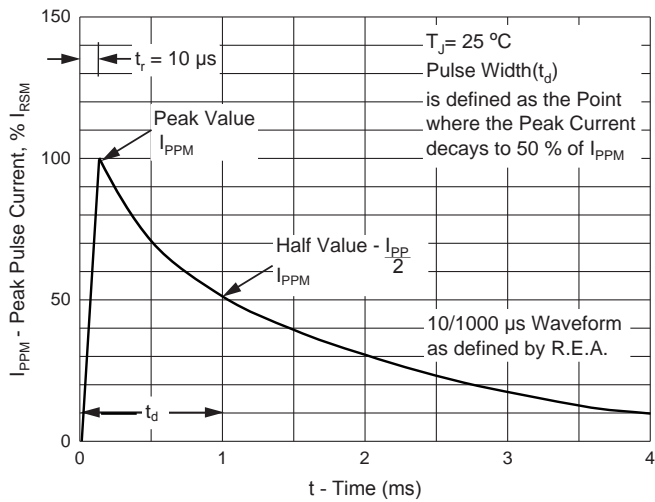


Fig. 4 - Pulse Derating Curve

