



Micro Commercial Components  
 21201 Itasca Street Chatsworth  
 CA 91311  
 Phone: (818) 701-4933  
 Fax: (818) 701-4939

# 3KP5.0(C)(A) THRU 3KP170(C)(A)

## 3000Watts Transient Voltage Suppressor 5.0 to 170 Volts

### Features

- 3000 Watts Peak Power
- Low Inductance
- Unidirectional and Bidirectional unit
- Voltage Range: 5.0 to 170 Volts.

### Mechanical Data

- Case: Molded Plastic
- Polarity: Color band denotes cathode.
- Terminals: Axial leads, solderable per MIL-STD-202, Methode 208

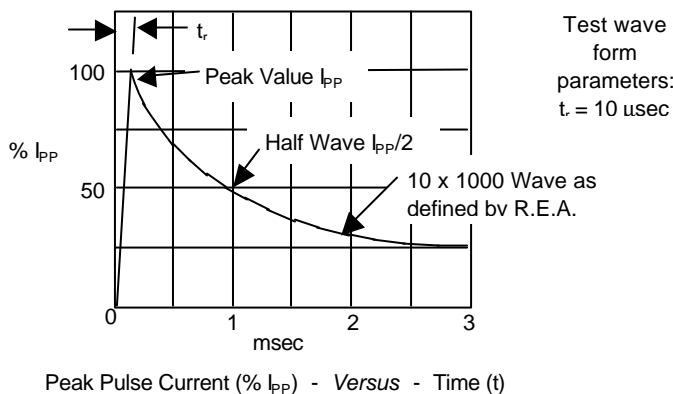
### Maximum Ratings

- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C
- 3000 watts of Peak Power Dissipation (10X1000 us)
- Forward Surge Current: 200 Amps, 1/120 sec @ 25°C
- $T_{clamping}$  (0 volts to  $V_{(BR)}$  min): less than  $1 \times 10^{-12}$  seconds

3KP

| DIMENSIONS |        |      |       |      |      |
|------------|--------|------|-------|------|------|
| DIM        | INCHES |      | MM    |      | NOTE |
|            | MIN    | MAX  | MIN   | MAX  |      |
| A          | .365   | .375 | 9.27  | 9.53 |      |
| B          | .240   | .250 | 6.10  | 6.35 |      |
| C          | .049   | .050 | 1.25  | 1.27 |      |
| D          | 1.100  | ---  | 27.94 | ---  |      |

Figure 1 - Pulse Waveform



# 3KP Series



| MCC PART NUMBER | REVERSE STAND-OFF VOLTAGE $V_{WM}$ (VOLTS) | BREAKDOWN VOLTAGE $V_{BR}$ @ $I_T$ (VOLTS) |      |            | MAXIMUM CLAMPING VOLTAGE @ $I_{PP}$ (VOLTS) | PEAK PULSE CURRENT $I_{PP}$ (AMPS) | MAXIMUM REVERSE LEAKAGE @ $V_{WM}$ $I_b$ ( $\mu$ A) |
|-----------------|--|--|------|------------|---|------------------------------------|---|
|                 |  | MIN  | MAX  | $I_T$ (mA) |   |                                    |   |
| 3KP5.0          | 5.0  | 6.40                                       | 7.30 | 10         | 9.6   | 312.5                              | 1000  |
| 3KP5.0A         | 5.0  | 6.40                                       | 7.00 | 10         | 9.2   | 326.0                              | 1000  |
| 3KP6.0          | 6.0  | 6.67                                       | 8.15 | 10         | 11.4  | 263.2                              | 1000  |
| 3KP6.0A         | 6.0  | 6.67                                       | 7.37 | 10         | 10.3  | 291.3                              | 1000  |
| 3KP6.5          | 6.5  | 7.22                                       | 8.82 | 10         | 12.3  | 243.9                              | 500   |
| 3KP6.5A         | 6.5  | 7.22                                       | 7.98 | 10         | 11.2  | 267.9                              | 500   |
| 3KP7.0          | 7.0  | 7.78                                       | 9.51 | 10         | 13.3  | 225.6                              | 200   |
| 3KP7.0A         | 7.0  | 7.78                                       | 8.60 | 10         | 12.0  | 250.0                              | 200   |
| 3KP7.5          | 7.5  | 8.33                                       | 10.2 | 1          | 14.3  | 209.8                              | 100   |
| 3KP7.5A         | 7.5  | 8.33                                       | 9.21 | 1          | 12.9  | 232.6                              | 100   |
| 3KP8.0          | 8.0  | 8.89                                       | 10.9 | 1          | 15.0  | 200.0                              | 50  |
| 3KP8.0A         | 8.0  | 8.89                                       | 9.83 | 1          | 13.6  | 220.6                              | 50  |
| 3KP8.5          | 8.5  | 9.44                                       | 11.5 | 1          | 15.9  | 188.6                              | 25  |
| 3KP8.5A         | 8.5  | 9.44                                       | 10.4 | 1          | 14.4  | 208.4                              | 25  |
| 3KP9.0          | 9.0  | 10.0                                       | 12.2 | 1          | 16.9  | 177.4                              | 10  |
| 3KP9.0A         | 9.0  | 10.0                                       | 11.1 | 1          | 15.4  | 194.8                              | 10  |
| 3KP10           | 10   | 11.1                                       | 13.6 | 1          | 18.8  | 159.6                              | 5   |
| 3KP10A          | 10   | 11.1                                       | 12.3 | 1          | 17.0  | 176.4                              | 5   |
| 3KP11           | 11   | 12.2                                       | 14.9 | 1          | 20.1  | 149.2                              | 5   |
| 3KP11A          | 11   | 12.2                                       | 13.5 | 1          | 18.2  | 164.8                              | 5   |
| 3KP12           | 12   | 13.3                                       | 16.3 | 1          | 22.0  | 136.4                              | 5   |
| 3KP12A          | 12   | 13.3                                       | 14.7 | 1          | 19.9  | 150.6                              | 5   |
| 3KP13           | 13   | 14.4                                       | 17.6 | 1          | 23.8  | 126.0                              | 5   |
| 3KP13A          | 13   | 14.4                                       | 15.9 | 1          | 21.5  | 139.4                              | 5   |
| 3KP14           | 14   | 15.6                                       | 19.1 | 1          | 25.8  | 116.2                              | 5   |
| 3KP14A          | 14   | 15.6                                       | 17.2 | 1          | 23.2  | 129.4                              | 5   |
| 3KP15           | 15   | 16.7                                       | 20.4 | 1          | 26.9  | 111.6                              | 5   |
| 3KP15A          | 15   | 16.7                                       | 18.5 | 1          | 24.4  | 123.0                              | 5   |
| 3KP16           | 16   | 17.8                                       | 21.8 | 1          | 28.8  | 104.2                              | 5   |
| 3KP16A          | 16   | 17.8                                       | 19.7 | 1          | 26.0  | 115.4                              | 5   |
| 3KP17           | 17   | 18.9                                       | 23.1 | 1          | 30.5  | 98.4                               | 5   |
| 3KP17A          | 17   | 18.9                                       | 20.9 | 1          | 27.6  | 106.6                              | 5   |
| 3KP18           | 18   | 20.0                                       | 24.4 | 1          | 32.2  | 93.2                               | 5   |
| 3KP18A          | 18   | 20.0                                       | 22.1 | 1          | 29.2  | 102.8                              | 5   |
| 3KP20           | 20   | 22.2                                       | 27.1 | 1          | 35.8  | 83.8                               | 5   |
| 3KP20A          | 20   | 22.2                                       | 24.5 | 1          | 32.4  | 92.6                               | 5   |
| 3KP22           | 22   | 24.4                                       | 29.8 | 1          | 39.4  | 76.2                               | 5   |
| 3KP22A          | 22   | 24.4                                       | 26.9 | 1          | 35.5  | 84.4                               | 5   |
| 3KP24           | 24   | 26.7                                       | 32.6 | 1          | 43.0  | 69.8                               | 5   |
| 3KP24A          | 24   | 26.7                                       | 29.5 | 1          | 38.9  | 77.2                               | 5   |
| 3KP26           | 26   | 28.9                                       | 35.3 | 1          | 46.6  | 64.4                               | 5   |
| 3KP26A          | 26   | 28.9                                       | 31.9 | 1          | 42.1  | 71.2                               | 5   |
| 3KP28           | 28   | 31.1                                       | 38.0 | 1          | 50.0  | 60.0                               | 5   |
| 3KP28A          | 28   | 31.1                                       | 34.4 | 1          | 45.4  | 66.0                               | 5   |
| 3KP30           | 30   | 33.3                                       | 40.7 | 1          | 53.5  | 56.0                               | 5   |
| 3KP30A          | 30   | 33.3                                       | 36.8 | 1          | 48.4  | 62.0                               | 5   |
| 3KP33           | 33   | 36.7                                       | 44.9 | 1          | 59.0  | 50.4                               | 5   |
| 3KP33A          | 33   | 36.7                                       | 40.6 | 1          | 53.3  | 56.2                               | 5   |
| 3KP36           | 36   | 40.0                                       | 48.9 | 1          | 64.3  | 46.6                               | 5   |
| 3KP36A          | 36   | 40.0                                       | 44.2 | 1          | 58.1  | 51.6                               | 5   |
| 3KP40           | 40   | 44.4                                       | 54.3 | 1          | 71.4  | 42.0                               | 5   |
| 3KP40A          | 40   | 44.4                                       | 49.1 | 1          | 64.5  | 46.4                               | 5   |
| 3KP43           | 43   | 47.8                                       | 58.4 | 1          | 76.7  | 39.2                               | 5   |
| 3KP43A          | 43   | 47.8                                       | 52.8 | 1          | 69.4  | 43.2                               | 5   |
| 3KP45           | 45   | 50.0                                       | 61.1 | 1          | 80.3  | 37.4                               | 5   |
| 3KP45A          | 45   | 50.0                                       | 55.3 | 1          | 72.7  | 41.2                               | 5   |
| 3KP48           | 48   | 53.3                                       | 65.1 | 1          | 85.5  | 35.0                               | 5   |

# 3KP Series



| MCC PART NUMBER | REVERSE STAND-OFF VOLTAGE $V_{WM}$ | BREAKDOWN VOLTAGE $V_{(BR)} @ I_T$ (VOLTS) |      |            | MAXIMUM CLAMPING VOLTAGE @ $I_{PP}$ | PEAK PULSE CURRENT $I_{PP}$ | MAXIMUM REVERSE LEAKAGE @ $V_{WM}$ $I_b$ |
|-----------------|------------------------------------|--|------|------------|-------------------------------------|-----------------------------|--|
|                 | (VOLTS)                            | MIN  | MAX  | $I_T$ (mA) | (VOLTS)                             | (AMPS)                      | ( $\mu A$ )                              |
| 3KP48A          | 48                                 | 53.3                                       | 58.9 | 1          | 77.4                                | 38.8                        | 5  |
| 3KP51           | 51                                 | 56.7                                       | 69.3 | 1          | 91.1                                | 37.0                        | 5  |
| 3KP51A          | 51                                 | 56.7                                       | 62.7 | 1          | 82.4                                | 36.4                        | 5  |
| 3KP54           | 54                                 | 60.0                                       | 73.3 | 1          | 96.3                                | 31.2                        | 5  |
| 3KP54A          | 54                                 | 60.0                                       | 66.3 | 1          | 87.1                                | 34.4                        | 5  |
| 3KP58           | 58                                 | 64.4                                       | 78.7 | 1          | 103                                 | 39.2                        | 5  |
| 3KP58A          | 58                                 | 64.4                                       | 71.2 | 1          | 93.6                                | 32.0                        | 5  |
| 3KP60           | 60                                 | 66.7                                       | 81.5 | 1          | 107                                 | 28.0                        | 5  |
| 3KP60A          | 60                                 | 66.7                                       | 73.7 | 1          | 96.8                                | 31.0                        | 5  |
| 3KP64           | 64                                 | 71.1                                       | 86.9 | 1          | 114                                 | 26.4                        | 5  |
| 3KP64A          | 64                                 | 71.1                                       | 78.6 | 1          | 103                                 | 29.2                        | 5  |
| 3KP70           | 70                                 | 77.8                                       | 95.1 | 1          | 125                                 | 24.0                        | 5  |
| 3KP70A          | 70                                 | 77.8                                       | 86.0 | 1          | 113                                 | 26.6                        | 5  |
| 3KP75           | 75                                 | 83.3                                       | 102  | 1          | 134                                 | 22.4                        | 5  |
| 3KP75A          | 75                                 | 83.3                                       | 92.1 | 1          | 121                                 | 24.8                        | 5  |
| 3KP78           | 78                                 | 86.7                                       | 106  | 1          | 139                                 | 21.6                        | 5  |
| 3KP78A          | 78                                 | 86.7                                       | 95.8 | 1          | 126                                 | 22.8                        | 5  |
| 3KP85           | 85                                 | 94.4                                       | 115  | 1          | 151                                 | 19.8                        | 5  |
| 3KP85A          | 85                                 | 94.4                                       | 104  | 1          | 137                                 | 20.8                        | 5  |
| 3KP90           | 90                                 | 100  | 122  | 1          | 160                                 | 18.8                        | 5  |
| 3KP90A          | 90                                 | 100  | 111  | 1          | 146                                 | 20.6                        | 5  |
| 3KP100          | 100                                | 111  | 136  | 1          | 179                                 | 16.8                        | 5  |
| 3KP100A         | 100                                | 111  | 123  | 1          | 162                                 | 18.6                        | 5  |
| 3KP110          | 110                                | 122  | 149  | 1          | 196                                 | 15.4                        | 5  |
| 3KP110A         | 110                                | 122  | 135  | 1          | 177                                 | 16.8                        | 5  |
| 3KP120          | 120                                | 133  | 163  | 1          | 214                                 | 14.0                        | 5  |
| 3KP120A         | 120                                | 133  | 147  | 1          | 193                                 | 15.6                        | 5  |
| 3KP130          | 130                                | 144  | 176  | 1          | 231                                 | 13.0                        | 5  |
| 3KP130A         | 130                                | 144  | 159  | 1          | 209                                 | 14.4                        | 5  |
| 3KP150          | 150                                | 167  | 204  | 1          | 268                                 | 11.2                        | 5  |
| 3KP150A         | 150                                | 167  | 185  | 1          | 243                                 | 12.4                        | 5  |
| 3KP160          | 160                                | 178  | 218  | 1          | 287                                 | 10.4                        | 5  |
| 3KP160A         | 160                                | 178  | 197  | 1          | 259                                 | 11.6                        | 5  |
| 3KP170          | 170                                | 189  | 231  | 1          | 304                                 | 9.8                         | 5  |
| 3KP170A         | 170                                | 189  | 209  | 1          | 275                                 | 11.0                        | 5  |

Figure 2 - Derating Curve

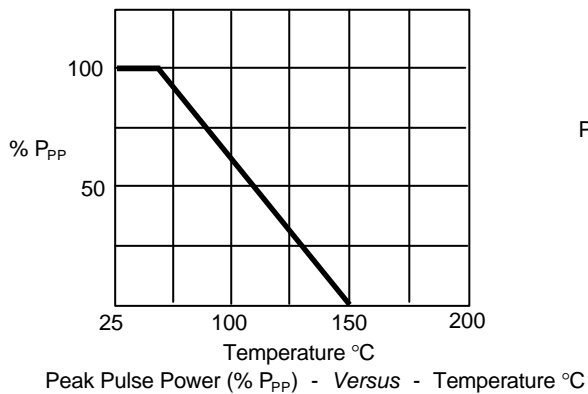
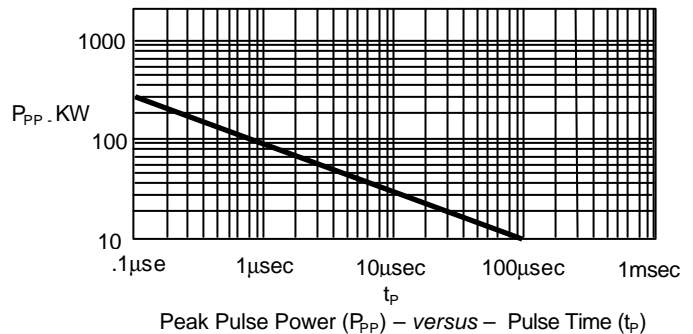


Figure 3



## 3KP Series



### **ORDER INFORMATION:**

P/N: 3KPXXX-\*

\* ----- B (Bulk Packaging)

\* ----- T (Tape and Reel Packaging)

For Example:

3KP28A-T means MCC P/N is 3KP28A, tape and reel package.