



Micro Commercial Components



Micro Commercial Components  
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**5KP5.0(C)  
THRU  
5KP250(C)A**

**5000 Watt  
Transient Voltage  
Suppressors  
5.0 to 250 Volts**

### Features

- Unidirectional And Bidirectional
- UL Recognized File # E331408
- High Temp Soldering: 260°C for 10 Seconds At Terminals
- For Bidirectional Devices Add "C" To The Suffix Of The Part Number: i.e. 5KP6.5C or 5KP6.5CA for 5% Tolerance Devices
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking : Cathode band and type number
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)

### Maximum Ratings

- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C
- 5000 Watt Peak Power
- Response Time  $1 \times 10^{-12}$  Seconds For Unidirectional and  $5 \times 10^{-9}$  For Bidirectional
- Halogen free available upon request by adding suffix "-HF"
- Typical Thermal Resistance, Junction to Lead: 8.0°C/W
- Typical Thermal Resistance, Junction to Ambient: 40°C/W



Notes:1.High Temperature Solder Exemption Applied, see EU Directive Annex 7.

# 5KP5.0(C) thru 5KP250(C)A

Figure 3 - Typical Capacitance



Typical Capacitance (pf) – versus – Breakdown voltage

Figure 4 - Derating Curve



Peak Pulse Power (% P<sub>PP</sub>) - Versus - Temperature °C

## ELECTRICAL CHARACTERISTICS @25°C

| MCC PART NUMBER |          | REVERSE STAND-OFF VOLTAGE<br>V <sub>WM</sub><br>(VOLTS) | BREAKDOWN VOLTAGE<br>V <sub>(BR)</sub> @ I <sub>T</sub><br>(VOLTS) |      |                     | MAXIMUM CLAMPING VOLTAGE @ I <sub>PP</sub><br>(VOLTS) | PEAK PULSE CURRENT<br>I <sub>PP</sub><br>(AMPS) | MAXIMUM REVERSE LEAKAGE @ V <sub>WM</sub><br>I <sub>D</sub><br>(µA) |
|-----------------|----------|---|--|------|---------------------|---|---|---|
| UNI-POLAR       | BI-POLAR |   | MIN  | MAX  | I <sub>T</sub> (mA) |   |   |   |
| 5KP5.0          | 5KP5.0C  | 5.0   | 6.40   | 7.30 | 50                  | 9.6   | 520   | 5000  |
| 5KP5.0A         | 5KP5.0CA | 5.0   | 6.40   | 7.00 | 50                  | 9.2   | 543   | 5000  |
| 5KP6.0          | 5KP6.0C  | 6.0   | 6.67   | 8.15 | 50                  | 11.4  | 439   | 5000  |
| 5KP6.0A         | 5KP6.0CA | 6.0   | 6.67   | 7.37 | 50                  | 10.3  | 485   | 5000  |
| 5KP6.5          | 5KP6.5C  | 6.5   | 7.22   | 8.82 | 50                  | 12.3  | 407   | 2000  |
| 5KP6.5A         | 5KP6.5CA | 6.5   | 7.22   | 7.98 | 50                  | 11.2  | 447   | 2000  |
| 5KP7.0          | 5KP7.0C  | 7.0   | 7.78   | 9.51 | 50                  | 13.3  | 378   | 1000  |
| 5KP7.0A         | 5KP7.0CA | 7.0   | 7.78   | 8.60 | 50                  | 12.0  | 417   | 1000  |
| 5KP7.5          | 5KP7.5C  | 7.5   | 8.33   | 10.2 | 5                   | 14.3  | 350   | 250   |
| 5KP7.5A         | 5KP7.5CA | 7.5   | 8.33   | 9.21 | 5                   | 12.9  | 388   | 250   |
| 5KP8.0          | 5KP8.0C  | 8.0   | 8.89   | 10.9 | 5                   | 15.0  | 333   | 150   |
| 5KP8.0A         | 5KP8.0CA | 8.0   | 8.89   | 9.83 | 5                   | 13.6  | 367   | 150   |
| 5KP8.5          | 5KP8.5C  | 8.5   | 9.44   | 11.5 | 5                   | 15.9  | 314   | 50  |
| 5KP8.5A         | 5KP8.5CA | 8.5   | 9.44   | 10.4 | 5                   | 14.4  | 347   | 50  |
| 5KP9.0          | 5KP9.0C  | 9.0   | 10.0   | 12.2 | 5                   | 16.9  | 295   | 20  |
| 5KP9.0A         | 5KP9.0CA | 9.0   | 10.0   | 11.1 | 5                   | 15.4  | 325   | 20  |
| 5KP10           | 5KP10C   | 10  | 11.1   | 13.6 | 5                   | 18.8  | 266   | 15  |
| 5KP10A          | 5KP10CA  | 10  | 11.1   | 12.3 | 5                   | 17.0  | 294   | 15  |
| 5KP11           | 5KP11C   | 11  | 12.2   | 14.9 | 5                   | 20.1  | 249   | 10  |
| 5KP11A          | 5KP11CA  | 11  | 12.2   | 13.5 | 5                   | 18.2  | 274   | 10  |
| 5KP12           | 5KP12C   | 12  | 13.3   | 16.3 | 5                   | 22.0  | 227   | 10  |
| 5KP12A          | 5KP12CA  | 12  | 13.3   | 14.7 | 5                   | 19.9  | 251   | 10  |
| 5KP13           | 5KP13C   | 13  | 14.4   | 17.6 | 5                   | 23.8  | 210   | 10  |
| 5KP13A          | 5KP13CA  | 13  | 14.4   | 15.9 | 5                   | 21.5  | 232   | 10  |
| 5KP14           | 5KP14C   | 14  | 15.6   | 19.1 | 5                   | 25.8  | 194   | 10  |
| 5KP14A          | 5KP14CA  | 14  | 15.6   | 17.2 | 5                   | 23.2  | 215   | 10  |
| 5KP15           | 5KP15C   | 15  | 16.7   | 20.4 | 5                   | 26.9  | 188   | 10  |
| 5KP15A          | 5KP15CA  | 15  | 16.7   | 18.5 | 5                   | 24.4  | 206   | 10  |
| 5KP16           | 5KP16C   | 16  | 17.8   | 21.8 | 5                   | 28.8  | 176   | 10  |
| 5KP16A          | 5KP16CA  | 16  | 17.8   | 19.7 | 5                   | 26.0  | 192   | 10  |
| 5KP17           | 5KP17C   | 17  | 18.9   | 23.1 | 5                   | 30.5  | 164   | 10  |
| 5KP17A          | 5KP17CA  | 17  | 18.9   | 20.9 | 5                   | 27.6  | 181   | 10  |
| 5KP18           | 5KP18C   | 18  | 20.0   | 24.4 | 5                   | 32.2  | 155   | 10  |
| 5KP18A          | 5KP18CA  | 18  | 20.0   | 22.1 | 5                   | 29.2  | 172   | 10  |
| 5KP20           | 5KP20C   | 20  | 22.2   | 27.1 | 5                   | 35.8  | 139   | 10  |
| 5KP20A          | 5KP20CA  | 20  | 22.2   | 24.5 | 5                   | 32.4  | 154   | 10  |
| 5KP22           | 5KP22C   | 22  | 24.4   | 29.8 | 5                   | 39.4  | 127   | 10  |
| 5KP22A          | 5KP22CA  | 22  | 24.4   | 26.9 | 5                   | 35.5  | 141   | 10  |

# 5KP5.0(C) thru 5KP250(C)A

## ELECTRICAL CHARACTERISTICS @25°C

| 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 @ $V_{WM}$ $I_D$ ( $\mu$ A) |
|-----------------|----------|--|--|------|------------|---|------------------------------------|---|
| UNI-POLAR       | BI-POLAR |  | MIN  | MAX  | $I_T$ (mA) |   |                                    |   |
| 5KP24           | 5KP24C   | 24   | 26.7   | 32.6 | 5          | 43.0  | 116                                | 10  |
| 5KP24A          | 5KP24CA  | 24   | 26.7   | 29.5 | 5          | 38.9  | 128                                | 10  |
| 5KP26           | 5KP26C   | 26   | 28.9   | 35.3 | 5          | 46.6  | 107                                | 10  |
| 5KP26A          | 5KP26CA  | 26   | 28.9   | 31.9 | 5          | 42.1  | 119                                | 10  |
| 5KP28           | 5KP28C   | 28   | 31.1   | 38.0 | 5          | 50.0  | 99                                 | 10  |
| 5KP28A          | 5KP28CA  | 28   | 31.1   | 34.4 | 5          | 45.4  | 110                                | 10  |
| 5KP30           | 5KP30C   | 30   | 33.3   | 40.7 | 5          | 53.5  | 93                                 | 10  |
| 5KP30A          | 5KP30CA  | 30   | 33.3   | 36.8 | 5          | 48.4  | 103                                | 10  |
| 5KP33           | 5KP33C   | 33   | 36.7   | 44.9 | 5          | 59.0  | 85                                 | 10  |
| 5KP33A          | 5KP33CA  | 33   | 36.7   | 40.6 | 5          | 53.3  | 94                                 | 10  |
| 5KP36           | 5KP36C   | 36   | 40.0   | 48.9 | 5          | 64.3  | 78                                 | 10  |
| 5KP36A          | 5KP36CA  | 36   | 40.0   | 44.2 | 5          | 58.1  | 86                                 | 10  |
| 5KP40           | 5KP40C   | 40   | 44.4   | 54.3 | 5          | 71.4  | 70                                 | 10  |
| 5KP40A          | 5KP40CA  | 40   | 44.4   | 49.1 | 5          | 64.5  | 78                                 | 10  |
| 5KP43           | 5KP43C   | 43   | 47.8   | 58.4 | 5          | 76.7  | 65                                 | 10  |
| 5KP43A          | 5KP43CA  | 43   | 47.8   | 52.8 | 5          | 69.4  | 72                                 | 10  |
| 5KP45           | 5KP45C   | 45   | 50.0   | 61.1 | 5          | 80.3  | 62                                 | 10  |
| 5KP45A          | 5KP45CA  | 45   | 50.0   | 55.3 | 5          | 72.7  | 69                                 | 10  |
| 5KP48           | 5KP48C   | 48   | 53.3   | 65.1 | 5          | 85.5  | 58                                 | 10  |
| 5KP48A          | 5KP48CA  | 48   | 53.3   | 58.9 | 5          | 77.4  | 65                                 | 10  |
| 5KP 51          | 5KP 51C  | 51   | 56.7   | 69.3 | 5          | 91.1  | 55                                 | 10  |
| 5KP51A          | 5KP51CA  | 51   | 56.7   | 62.7 | 5          | 82.4  | 61                                 | 10  |
| 5KP54           | 5KP54C   | 54   | 60.0   | 73.3 | 5          | 96.3  | 52                                 | 10  |
| 5KP54A          | 5KP54CA  | 54   | 60.0   | 66.3 | 5          | 87.1  | 57                                 | 10  |
| 5KP58           | 5KP58C   | 58   | 64.4   | 78.7 | 5          | 103   | 49                                 | 10  |
| 5KP58A          | 5KP58CA  | 58   | 64.4   | 71.2 | 5          | 93.6  | 53                                 | 10  |
| 5KP60           | 5KP60C   | 60   | 66.7   | 81.5 | 5          | 107   | 47                                 | 10  |
| 5KP60A          | 5KP60CA  | 60   | 66.7   | 73.7 | 5          | 96.8  | 52                                 | 10  |
| 5KP64           | 5KP64C   | 64   | 71.1   | 86.9 | 5          | 114   | 44                                 | 10  |
| 5KP64A          | 5KP64CA  | 64   | 71.1   | 78.6 | 5          | 103   | 49                                 | 10  |
| 5KP70           | 5KP70C   | 70   | 77.8   | 95.1 | 5          | 125   | 40                                 | 10  |
| 5KP70A          | 5KP70CA  | 70   | 77.8   | 86.0 | 5          | 113   | 44                                 | 10  |
| 5KP75           | 5KP75C   | 75   | 83.3   | 102  | 5          | 134   | 37                                 | 10  |
| 5KP75A          | 5KP75CA  | 75   | 83.3   | 92.1 | 5          | 121   | 41                                 | 10  |
| 5KP78           | 5KP78C   | 78   | 86.7   | 106  | 5          | 139   | 36                                 | 10  |
| 5KP78A          | 5KP78CA  | 78   | 86.7   | 95.8 | 5          | 126   | 40                                 | 10  |
| 5KP85           | 5KP85C   | 85   | 94.4   | 115  | 5          | 151   | 33                                 | 10  |
| 5KP85A          | 5KP85CA  | 85   | 94.4   | 104  | 5          | 137   | 36                                 | 10  |
| 5KP90           | 5KP90C   | 90   | 100  | 122  | 5          | 160   | 31                                 | 10  |
| 5KP90A          | 5KP90CA  | 90   | 100  | 111  | 5          | 146   | 34                                 | 10  |
| 5KP100          | 5KP100C  | 100  | 111  | 136  | 5          | 179   | 28                                 | 10  |
| 5KP100A         | 5KP100CA | 100  | 111  | 123  | 5          | 162   | 31                                 | 10  |
| 5KP110          | 5KP110C  | 110  | 122  | 149  | 5          | 196   | 26                                 | 10  |
| 5KP110A         | 5KP110CA | 110  | 122  | 135  | 5          | 177   | 28                                 | 10  |
| 5KP120A         | 5KP120CA | 120  | 133  | 147  | 5          | 193   | 26.4                               | 10  |
| 5KP130A         | 5KP130CA | 130  | 144  | 159  | 5          | 209   | 24.4                               | 10  |
| 5KP150A         | 5KP150CA | 150  | 167  | 185  | 5          | 243   | 21.0                               | 10  |
| 5KP160A         | 5KP160CA | 160  | 178  | 197  | 5          | 259   | 19.7                               | 10  |
| 5KP170A         | 5KP170CA | 170  | 189  | 209  | 5          | 275   | 18.5                               | 10  |
| 5KP180A         | 5KP180CA | 180  | 200  | 221  | 5          | 292   | 17.5                               | 10  |
| 5KP190A         | 5KP190CA | 190  | 211  | 233  | 5          | 310   | 16.5                               | 10  |
| 5KP200A         | 5KP200CA | 200  | 222  | 246  | 5          | 329.2                                       | 15.5                               | 10  |
| 5KP210A         | 5KP210CA | 210  | 233  | 258  | 5          | 349.5                                       | 14.6                               | 10  |
| 5KP220A         | 5KP220CA | 220  | 244  | 270  | 5          | 371.1                                       | 13.7                               | 10  |
| 5KP250A         | 5KP250CA | 250  | 277  | 306  | 5          | 425   | 12.0                               | 10  |



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### 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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- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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