



Micro Commercial Components
 21201 Itasca Street Chatsworth
 CA 91311
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P5KE5.0 THRU P5KE170A

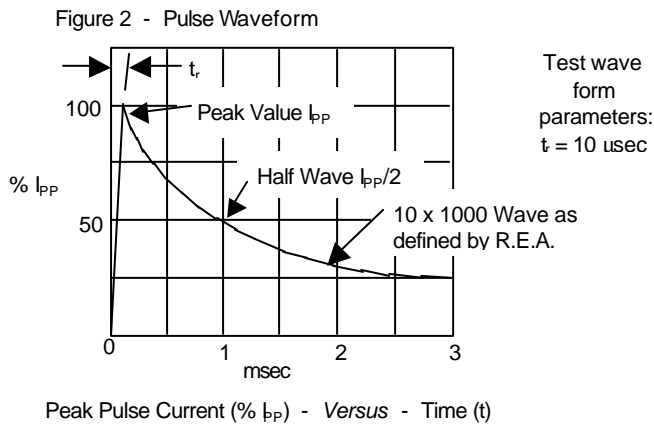
Features

- Unidirectional And Bidirectional
- Low Inductance
- High Temp Soldering: 250°C for 10 Seconds At Terminals
- For Bidirectional Devices Add "C" To The Suffix Of The Part Number: i.e. P5KE5.0C or P6KE5.0CA for 5% Tolerance Devices

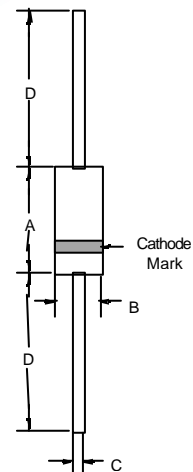
500 Watt Transient Voltage Suppressors 5.0 to 170 Volts

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- 500 Watt Peak Power
- Response Time 1×10^{-12} Seconds For Unidirectional and 5×10^{-9} For Bidirectional



DO-41

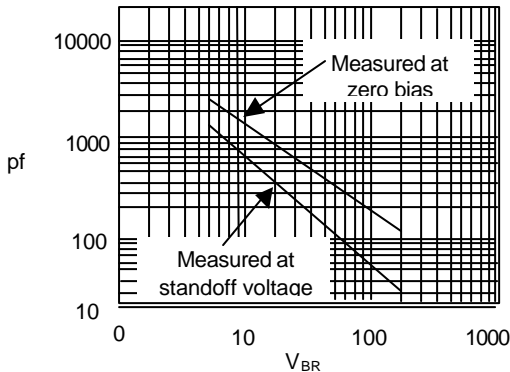


| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|------|-------|------|------|
| | INCHES | | MM | | |
| A | .166 | .205 | 4.10 | 5.20 | |
| B | .080 | .107 | 2.00 | 2.70 | |
| C | .028 | .034 | .70 | .90 | |
| D | 1.000 | --- | 25.40 | --- | |

P5KE5.0 thru P5KE170A

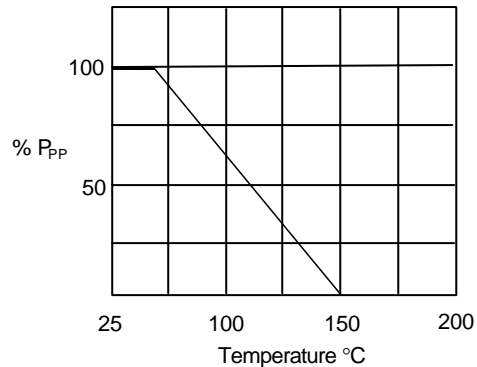


Figure 3 - Typical Capacitance



Typical Capacitance (pf) – versus – Breakdown voltage

Figure 4 - Derating Curve



Peak Pulse Power (% P_{PP}) - Versus - Temperature °C

ELECTRICAL CHARACTERISTICS @25°C

| MCC PART NUMBER | BREAKDOWN VOLTAGE V _(BR) @ I _T (VOLTS) | | | TEST CURRENT I _T mADC | RATED STANDOFF VOLTAGE V _{WM} V | MAXIMUM REVERSE LEAKAGE I _b @ V _{WM} (μA) | MAXIMUM CLAMPING VOLTAGE V _C @ I _{PP} V | MAXIMUM PEAK PULSE CURRENT I _{PP} A | MAX. TEMP COEFFICIENT OF V _(BR) (TA) -55°C TO 100°C %/°C |
|-----------------|--|-----|------|----------------------------------|--|---|---|--|---|
| | MIN | NOM | MAX | | | | | | |
| P5KE5.0 | 6.4 | 5.0 | 7.3 | 10 | 5.0 | 600 | 9.6 | 52 | .057 |
| P5KE5.0A | 6.4 | 5.0 | 7.0 | 10 | 5.0 | 600 | 9.2 | 54.3 | .057 |
| P5KE6.0 | 6.67 | 6.0 | 8.15 | 10 | 6.0 | 600 | 11.4 | 43.9 | .059 |
| P5KE6.0A | 6.67 | 6.0 | 7.37 | 10 | 6.0 | 600 | 10.3 | 48.5 | .059 |
| P5KE6.5 | 7.22 | 6.5 | 8.82 | 10 | 6.5 | 400 | 12.3 | 40.7 | .061 |
| P5KE6.5A | 7.22 | 6.5 | 7.98 | 10 | 6.5 | 400 | 11.2 | 44.7 | .061 |
| P5KE7.0 | 7.78 | 7.0 | 9.51 | 10 | 7.0 | 150 | 13.3 | 37.8 | .065 |
| P5KE7.0A | 7.78 | 7.0 | 8.6 | 10 | 7.0 | 150 | 12.0 | 41.7 | .065 |
| P5KE7.5 | 8.33 | 7.5 | 10.2 | 1 | 7.5 | 50 | 14.3 | 35.0 | .067 |
| P5KE7.5A | 8.33 | 7.5 | 9.21 | 1 | 7.5 | 50 | 12.9 | 38.8 | .067 |
| P5KE8.0 | 8.89 | 8.0 | 10.9 | 1 | 8.0 | 25 | 15.0 | 33.3 | .070 |
| P5KE8.0A | 8.89 | 8.0 | 9.8 | 1 | 8.0 | 25 | 13.6 | 36.7 | .070 |
| P5KE8.5 | 9.44 | 8.5 | 11.5 | 1 | 8.5 | 5 | 15.9 | 31.4 | .073 |
| P5KE8.5A | 9.44 | 8.5 | 10.4 | 1 | 8.5 | 5 | 14.4 | 34.7 | .073 |
| P5KE9.0 | 10.0 | 9.0 | 12.2 | 1 | 9.0 | 1 | 16.9 | 29.5 | .076 |
| P5KE9.0A | 10.0 | 9.0 | 11.1 | 1 | 9.0 | 1 | 15.4 | 32.5 | .076 |
| P5KE10 | 11.1 | 10 | 13.6 | 1 | 10 | 1 | 18.8 | 26.6 | .078 |
| P5KE10A | 11.1 | 10 | 12.3 | 1 | 10 | 1 | 17.0 | 29.4 | .078 |
| P5KE11 | 12.2 | 11 | 14.9 | 1 | 11 | 1 | 20.1 | 24.9 | .081 |
| P5KE11A | 12.2 | 11 | 13.5 | 1 | 11 | 1 | 18.2 | 27.4 | .081 |
| P5KE12 | 13.3 | 12 | 16.3 | 1 | 12 | 1 | 22.0 | 22.7 | .082 |
| P5KE12A | 13.3 | 12 | 14.7 | 1 | 12 | 1 | 19.9 | 25.1 | .082 |
| P5KE13 | 14.4 | 13 | 17.6 | 1 | 13 | 1 | 23.8 | 21.0 | .084 |
| P5KE13A | 14.4 | 13 | 15.9 | 1 | 13 | 1 | 21.5 | 23.2 | .084 |
| P5KE14 | 15.6 | 14 | 19.1 | 1 | 14 | 1 | 25.8 | 19.4 | .086 |
| P5KE14A | 15.6 | 14 | 17.2 | 1 | 14 | 1 | 23.2 | 21.5 | .086 |
| P5KE15 | 16.7 | 15 | 20.4 | 1 | 15 | 1 | 26.9 | 18.8 | .087 |
| P5KE15A | 16.7 | 15 | 18.5 | 1 | 15 | 1 | 24.4 | 20.6 | .087 |
| P5KE16 | 17.8 | 16 | 21.8 | 1 | 16 | 1 | 28.8 | 17.6 | .088 |
| P5KE16A | 17.8 | 16 | 19.7 | 1 | 16 | 1 | 26.0 | 19.2 | .088 |
| P5KE17 | 18.9 | 17 | 23.1 | 1 | 17 | 1 | 30.5 | 16.4 | .090 |
| P5KE17A | 18.9 | 17 | 20.9 | 1 | 17 | 1 | 27.6 | 18.1 | .090 |
| P5KE18 | 20.0 | 18 | 24.4 | 1 | 18 | 1 | 32.2 | 15.5 | .092 |
| P5KE18A | 20.0 | 18 | 22.1 | 1 | 18 | 1 | 29.2 | 17.2 | .092 |
| P5KE20 | 22.2 | 20 | 27.1 | 1 | 20 | 1 | 35.8 | 13.9 | .093 |
| P5KE20A | 22.2 | 20 | 24.5 | 1 | 20 | 1 | 32.4 | 15.4 | .093 |

P5KE5.0 thru P5KE170A



ELECTRICAL CHARACTERISTICS @25°C

| MCC PART NUMBER | BREAKDOWN VOLTAGE $V_{(BR)} @ I_T$ (VOLTS) | | | TEST CURRENT I_T mADC | RATED STANDOFF VOLTAGE V_{WM} V | MAXIMUM REVERSE LEAKAGE $I_b @ V_{WM}$ (μ A) | MAXIMUM CLAMPING VOLTAGE $V_C @ I_{PP}$ V | MAXIMUM PEAK PULSE CURRENT I_{PP} A | MAX. TEMP COEFFICIENT OF V_{BR} $V_{(BR)}$ (TA) -55°C TO 100°C % / °C |
|--------------------|--|-----|------|----------------------------------|---|---|---|--|--|
| | MIN | NOM | MAX | | | | | | |
| P5KE22 | 24.4 | 22 | 29.8 | 1 | 22 | 1 | 39.4 | 12.7 | .094 |
| P5KE22A | 24.4 | 22 | 26.9 | 1 | 22 | 1 | 35.5 | 14.1 | .094 |
| P5KE24 | 26.7 | 24 | 32.6 | 1 | 24 | 1 | 43.0 | 11.6 | .096 |
| P5KE24A | 26.7 | 24 | 29.5 | 1 | 24 | 1 | 38.9 | 12.8 | .096 |
| P5KE26 | 28.9 | 26 | 35.3 | 1 | 26 | 1 | 46.6 | 10.7 | .097 |
| P5KE26A | 28.9 | 26 | 31.9 | 1 | 26 | 1 | 42.1 | 11.9 | .097 |
| P5KE28 | 31.1 | 28 | 38.0 | 1 | 28 | 1 | 50.0 | 9.9 | .098 |
| P5KE28A | 31.1 | 28 | 84.4 | 1 | 28 | 1 | 45.4 | 11.0 | .098 |
| P5KE30 | 33.3 | 30 | 40.7 | 1 | 30 | 1 | 53.5 | 9.3 | .099 |
| P5KE30A | 33.3 | 30 | 36.8 | 1 | 30 | 1 | 48.4 | 10.3 | .099 |
| P5KE33 | 36.7 | 33 | 44.9 | 1 | 33 | 1 | 59.0 | 8.5 | .100 |
| P5KE33A | 36.7 | 33 | 40.6 | 1 | 33 | 1 | 53.3 | 9.4 | .100 |
| P5KE36 | 40.0 | 36 | 48.9 | 1 | 36 | 1 | 64.3 | 7.8 | .101 |
| P5KE36A | 40.0 | 36 | 44.2 | 1 | 36 | 1 | 58.1 | 8.6 | .101 |
| P5KE40 | 44.4 | 40 | 54.3 | 1 | 40 | 1 | 71.4 | 7.0 | .101 |
| P5KE40A | 44.4 | 40 | 49.1 | 1 | 40 | 1 | 64.5 | 7.8 | .101 |
| P5KE43 | 47.8 | 43 | 58.4 | 1 | 43 | 1 | 76.7 | 6.5 | .102 |
| P5KE43A | 47.8 | 43 | 52.8 | 1 | 43 | 1 | 69.4 | 7.2 | .102 |
| P5KE45 | 50.0 | 45 | 61.1 | 1 | 45 | 1 | 80.3 | 6.2 | .102 |
| P5KE45A | 50.0 | 45 | 55.3 | 1 | 45 | 1 | 72.7 | 6.9 | .102 |
| P5KE48 | 53.3 | 48 | 65.1 | 1 | 48 | 1 | 85.5 | 5.8 | .103 |
| P5KE48A | 53.3 | 48 | 58.9 | 1 | 48 | 1 | 77.4 | 6.5 | .103 |
| P5KE51 | 56.7 | 51 | 69.3 | 1 | 51 | 1 | 91.1 | 5.5 | .103 |
| P5KE51A | 56.7 | 51 | 62.7 | 1 | 51 | 1 | 82.4 | 6.1 | .103 |
| P5KE54 | 60.0 | 54 | 73.3 | 1 | 54 | 1 | 96.3 | 5.2 | .104 |
| P5KE54A | 60.0 | 54 | 66.3 | 1 | 54 | 1 | 87.1 | 5.7 | .104 |
| P5KE58 | 64.4 | 58 | 78.7 | 1 | 58 | 1 | 103 | 4.9 | .104 |
| P5KE58A | 64.4 | 58 | 71.2 | 1 | 58 | 1 | 93.6 | 5.3 | .104 |
| P5KE60 | 66.7 | 60 | 81.5 | 1 | 60 | 1 | 107 | 4.7 | .104 |
| P5KE60A | 66.7 | 60 | 73.7 | 1 | 60 | 1 | 96.8 | 5.2 | .104 |
| P5KE64 | 71.1 | 64 | 86.9 | 1 | 64 | 1 | 114 | 4.4 | .105 |
| P5KE64A | 71.1 | 64 | 78.6 | 1 | 64 | 1 | 103 | 4.9 | .105 |
| P5KE70 | 77.8 | 70 | 95.1 | 1 | 70 | 1 | 125 | 4.0 | .105 |
| P5KE70A | 77.8 | 70 | 86 | 1 | 70 | 1 | 113 | 4.4 | .105 |
| P5KE75 | 83.3 | 75 | 102 | 1 | 75 | 1 | 134 | 3.7 | .105 |
| P5KE75A | 83.3 | 75 | 92.1 | 1 | 75 | 1 | 121 | 4.1 | .105 |
| P5KE78 | 86.7 | 78 | 106 | 1 | 78 | 1 | 139 | 3.6 | .106 |
| P5KE78A | 86.7 | 78 | 95.8 | 1 | 78 | 1 | 126 | 4.0 | .106 |
| P5KE85 | 94.4 | 85 | 115 | 1 | 85 | 1 | 151 | 3.3 | .106 |
| P5KE85A | 94.4 | 85 | 104 | 1 | 85 | 1 | 137 | 3.6 | .106 |
| P5KE90 | 100 | 90 | 122 | 1 | 90 | 1 | 160 | 3.1 | .107 |
| P5KE90A | 100 | 90 | 111 | 1 | 90 | 1 | 146 | 3.4 | .107 |
| P5KE100 | 111 | 100 | 136 | 1 | 100 | 1 | 179 | 2.8 | .107 |
| P5KE100A | 111 | 100 | 123 | 1 | 100 | 1 | 162 | 3.1 | .107 |
| P5KE110 | 122 | 110 | 149 | 1 | 110 | 1 | 196 | 2.6 | .107 |
| P5KE110A | 122 | 110 | 135 | 1 | 110 | 1 | 177 | 2.8 | .107 |
| P5KE120 | 133 | 120 | 163 | 1 | 120 | 1 | 214 | 2.3 | .107 |
| P5KE120A | 133 | 120 | 147 | 1 | 120 | 1 | 193 | 2.0 | .107 |
| P5KE130 | 144 | 130 | 176 | 1 | 130 | 1 | 231 | 2.2 | .108 |
| P5KE130A | 144 | 130 | 159 | 1 | 130 | 1 | 209 | 2.4 | .108 |
| P5KE150 | 167 | 150 | 204 | 1 | 150 | 1 | 268 | 1.9 | .108 |
| P5KE150A | 167 | 150 | 185 | 1 | 150 | 1 | 243 | 2.1 | .108 |
| P5KE160 | 178 | 160 | 218 | 1 | 160 | 1 | 287 | 1.7 | .108 |
| P5KE160A | 178 | 160 | 197 | 1 | 160 | 1 | 259 | 1.9 | .108 |
| P5KE170 | 189 | 170 | 231 | 1 | 170 | 1 | 304 | 1.6 | .108 |
| P5KE170A | 189 | 170 | 209 | 1 | 170 | 1 | 275 | 1.8 | .108 |