



Micro Commercial Corp.
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P4KE6.8 THRU P4KE400A

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. P4KE6.8C or P4KE6.8CA for 5% Tolerance Devices

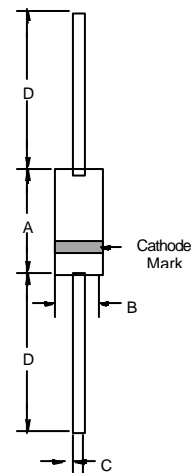
400 Watt Transient Voltage Suppressors 6.8 to 400 Volts

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- 400 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 | --- | |

P4KE6.8 thru P4KE400A



Figure 3 - Typical Capacitance



Typical Capacitance (pf) – versus – Breakdown voltage (V_{BR})

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 | RATED STANDOFF VOLTAGE V_{WM} | MAXIMUM REVERSE LEAKAGE I_D @ V_{WM} | MAXIMUM CLAMPING VOLTAGE V_C @ I_{PP} | MAXIMUM PEAK PULSE CURRENT I_{PP} | MAX. TEMP COEFFICIENT OF V_{BR} $V_{(BR)}$ (TA) -55°C TO 100°C |
|-----------------|--|-----|------|--------------------|---------------------------------|--|---|-------------------------------------|--|
| | MIN | NOM | MAX | | | | | | |
| P4KE6.8 | 6.12 | 6.8 | 7.48 | 10 | 5.50 | 500 | 10.8 | 37 | .057 |
| P4KE6.8A | 6.45 | 6.8 | 7.14 | 10 | 5.80 | 500 | 10.5 | 38 | .057 |
| P4KE7.5 | 6.75 | 7.5 | 8.25 | 10 | 6.05 | 200 | 11.7 | 34 | .061 |
| P4KE7.5A | 7.13 | 7.5 | 7.88 | 10 | 6.40 | 200 | 11.3 | 35 | .061 |
| P4KE8.2 | 7.38 | 8.2 | 9.02 | 10 | 6.63 | 100 | 12.5 | 32 | .065 |
| P4KE8.2A | 7.79 | 8.2 | 8.61 | 10 | 7.02 | 100 | 12.1 | 33 | .065 |
| P4KE9.1 | 8.19 | 9.1 | 10.0 | 1 | 7.37 | 20 | 13.8 | 29 | .068 |
| P4KE9.1A | 8.65 | 9.1 | 9.55 | 1 | 7.78 | 20 | 13.4 | 30 | .068 |
| P4KE10 | 9.00 | 10 | 11.0 | 1 | 8.10 | 20 | 15.0 | 27 | .073 |
| P4KE10A | 9.50 | 10 | 10.5 | 1 | 8.55 | 5 | 14.5 | 28 | .073 |
| P4KE11 | 9.90 | 11 | 12.1 | 1 | 8.92 | 2 | 16.2 | 25 | .075 |
| P4KE11A | 10.5 | 11 | 11.6 | 1 | 9.40 | 2 | 15.6 | 26 | .075 |
| P4KE12 | 10.8 | 12 | 13.2 | 1 | 9.72 | 2 | 17.3 | 23 | .078 |
| P4KE12A | 11.4 | 12 | 12.6 | 1 | 10.2 | 2 | 16.7 | 24 | .078 |
| P4KE13 | 11.7 | 13 | 14.3 | 1 | 10.5 | 2 | 19.0 | 21 | .081 |
| P4KE13A | 12.4 | 13 | 13.7 | 1 | 11.1 | 2 | 18.2 | 22 | .081 |
| P4KE15 | 13.5 | 15 | 16.5 | 1 | 12.1 | 2 | 22.0 | 18 | .084 |
| P4KE15A | 14.3 | 15 | 15.8 | 1 | 12.8 | 2 | 21.2 | 19 | .084 |
| P4KE16 | 14.4 | 16 | 17.6 | 1 | 12.9 | 2 | 23.5 | 17 | .086 |
| P4KE16A | 15.2 | 16 | 16.8 | 1 | 13.6 | 2 | 22.5 | 18 | .086 |
| P4KE18 | 16.2 | 18 | 19.8 | 1 | 14.5 | 2 | 26.5 | 15 | .088 |
| P4KE18A | 17.1 | 18 | 18.0 | 1 | 15.3 | 2 | 25.2 | 16 | .088 |
| P4KE20 | 18.0 | 20 | 22.0 | 1 | 16.2 | 2 | 29.1 | 14 | .090 |
| P4KE20A | 19.0 | 20 | 21.0 | 1 | 17.1 | 2 | 27.7 | 14.5 | .090 |
| P4KE22 | 19.8 | 22 | 24.2 | 1 | 17.8 | 2 | 31.9 | 12.5 | .092 |
| P4KE22A | 20.9 | 22 | 23.1 | 1 | 18.8 | 2 | 30.6 | 13 | .092 |
| P4KE24 | 21.6 | 24 | 26.4 | 1 | 19.4 | 2 | 34.7 | 11.5 | .094 |
| P4KE24A | 22.8 | 24 | 25.2 | 1 | 20.5 | 2 | 33.2 | 12 | .094 |
| P4KE27 | 24.3 | 27 | 29.7 | 1 | 21.8 | 2 | 39.1 | 10 | .096 |
| P4KE27A | 25.7 | 27 | 28.4 | 1 | 23.1 | 2 | 37.5 | 11 | .096 |
| P4KE30 | 27.0 | 30 | 33.0 | 1 | 24.3 | 2 | 43.5 | 9.0 | .097 |
| P4KE30A | 28.5 | 30 | 31.5 | 1 | 25.6 | 2 | 41.4 | 9.5 | .097 |
| P4KE33 | 29.7 | 33 | 36.3 | 1 | 26.8 | 2 | 47.7 | 8.5 | .098 |
| P4KE33A | 31.4 | 33 | 34.7 | 1 | 28.2 | 2 | 45.7 | 9.0 | .098 |
| P4KE36 | 32.4 | 36 | 39.6 | 1 | 29.1 | 2 | 52.0 | 7.5 | .099 |
| P4KE36A | 34.2 | 36 | 37.8 | 1 | 30.8 | 2 | 49.9 | 8.0 | .099 |

P4KE6.8 thru P4KE400A



ELECTRICAL CHARACTERISTICS @25°C

| MCC PART NUMBER | BREAKDOWN VOLTAGE $V_{(BR)}$ @ I_T (VOLTS) | | | TEST CURRENT I_T | RATED STANDOFF VOLTAGE V_{WM} | MAXIMUM REVERSE LEAKAGE I_b @ V_{WM} | MAXIMUM CLAMPING VOLTAGE V_C @ I_{PP} | MAXIMUM PEAK PULSE CURRENT I_{PP} | MAX. TEMP COEFFICIENT OF V_{BR} $V_{(BR)}$ (TA) -55°C TO 100°C |
|--------------------|--|-----|------|--------------------------|--|---|--|---|--|
| | MIN | NOM | MAX | | | | | | |
| P4KE39 | 35.1 | 39 | 42.9 | 1 | 31.6 | 2 | 56.4 | 7.0 | .100 |
| P4KE39A | 37.1 | 39 | 41.0 | 1 | 33.3 | 2 | 53.9 | 7.5 | .100 |
| P4KE43 | 38.7 | 43 | 47.3 | 1 | 34.8 | 2 | 61.9 | 6.5 | .101 |
| P4KE43A | 40.9 | 43 | 45.2 | 1 | 36.8 | 2 | 59.3 | 7.0 | .101 |
| P4KE47 | 42.3 | 47 | 51.7 | 1 | 38.1 | 2 | 67.8 | 5.9 | .101 |
| P4KE47A | 44.7 | 47 | 49.4 | 1 | 40.2 | 2 | 64.8 | 6.2 | .101 |
| P4KE51 | 45.9 | 51 | 56.1 | 1 | 41.3 | 2 | 73.5 | 5.4 | .102 |
| P4KE51A | 48.5 | 51 | 53.6 | 1 | 43.6 | 2 | 70.1 | 5.7 | .102 |
| P4KE56 | 50.4 | 56 | 61.6 | 1 | 45.4 | 2 | 80.5 | 5.0 | .103 |
| P4KE56A | 53.2 | 56 | 58.8 | 1 | 47.8 | 2 | 77.0 | 5.2 | .103 |
| P4KE62 | 55.8 | 62 | 68.2 | 1 | 50.2 | 2 | 89.0 | 4.5 | .104 |
| P4KE62A | 58.9 | 62 | 65.1 | 1 | 53.0 | 2 | 85.0 | 4.7 | .104 |
| P4KE68 | 61.2 | 68 | 74.8 | 1 | 55.1 | 2 | 98.0 | 4.1 | .104 |
| P4KE68A | 64.6 | 68 | 71.4 | 1 | 58.1 | 2 | 92.0 | 4.4 | .104 |
| P4KE75 | 67.5 | 75 | 82.5 | 1 | 60.7 | 2 | 108 | 3.7 | .105 |
| P4KE75A | 71.3 | 75 | 78.8 | 1 | 64.1 | 2 | 103 | 3.9 | .105 |
| P4KE82 | 73.8 | 82 | 90.2 | 1 | 66.4 | 2 | 118 | 3.4 | .105 |
| P4KE82A | 77.9 | 82 | 86.1 | 1 | 70.1 | 2 | 113 | 3.5 | .105 |
| P4KE91 | 81.9 | 91 | 100 | 1 | 73.7 | 2 | 131 | 3.1 | .106 |
| P4KE91A | 86.5 | 91 | 95.5 | 1 | 77.8 | 2 | 125 | 3.2 | .106 |
| P4KE100 | 90.0 | 100 | 110 | 1 | 81.0 | 2 | 144 | 2.8 | .106 |
| P4KE100A | 95.0 | 100 | 105 | 1 | 85.5 | 2 | 137 | 2.9 | .106 |
| P4KE110 | 99.0 | 110 | 121 | 1 | 89.2 | 2 | 158 | 2.5 | .107 |
| P4KE110A | 105 | 110 | 116 | 1 | 94.0 | 2 | 152 | 2.6 | .107 |
| P4KE120 | 108 | 120 | 132 | 1 | 97.2 | 2 | 173 | 2.3 | .107 |
| P4KE120A | 114 | 120 | 126 | 1 | 102 | 2 | 165 | 2.4 | .107 |
| P4KE130 | 117 | 130 | 143 | 1 | 105 | 2 | 187 | 2.1 | .107 |
| P4KE130A | 124 | 130 | 137 | 1 | 111 | 2 | 179 | 2.2 | .107 |
| P4KE150 | 135 | 150 | 165 | 1 | 121 | 2 | 215 | 1.9 | .108 |
| P4KE150A | 143 | 150 | 158 | 1 | 128 | 2 | 207 | 1.95 | .108 |
| P4KE160 | 144 | 160 | 176 | 1 | 130 | 2 | 230 | 1.7 | .108 |
| P4KE160A | 152 | 160 | 168 | 1 | 136 | 2 | 219 | 1.8 | .108 |
| P4KE170 | 153 | 170 | 187 | 1 | 138 | 2 | 244 | 1.6 | .108 |
| P4KE170A | 162 | 170 | 179 | 1 | 145 | 2 | 234 | 1.7 | .108 |
| P4KE180 | 162 | 180 | 198 | 1 | 146 | 2 | 258 | 1.5 | .108 |
| P4KE180A | 171 | 180 | 189 | 1 | 154 | 2 | 246 | 1.6 | .108 |
| P4KE200 | 180 | 200 | 220 | 1 | 162 | 2 | 287 | 1.4 | .108 |
| P4KE200A | 190 | 200 | 210 | 1 | 171 | 2 | 274 | 1.5 | .108 |
| P4KE220 | 198 | 220 | 242 | 1 | 175 | 2 | 344 | 1.0 | .110 |
| P4KE220A | 209 | 220 | 231 | 1 | 185 | 2 | 328 | 1.0 | .110 |
| P4KE250 | 225 | 250 | 275 | 1 | 202 | 2 | 360 | 1.0 | .110 |
| P4KE250A | 237 | 250 | 263 | 1 | 214 | 2 | 344 | 1.0 | .110 |
| P4KE300 | 270 | 300 | 330 | 1 | 243 | 2 | 430 | 1.0 | .110 |
| P4KE300A | 285 | 300 | 315 | 1 | 256 | 2 | 414 | 1.0 | .110 |
| P4KE350 | 315 | 350 | 385 | 1 | 284 | 2 | 504 | 1.0 | .110 |
| P4KE350A | 333 | 350 | 368 | 1 | 300 | 2 | 482 | 1.0 | .110 |
| P4KE400 | 360 | 400 | 440 | 1 | 324 | 2 | 574 | 1.0 | .110 |
| P4KE400A | 380 | 400 | 420 | 1 | 342 | 2 | 548 | 1.0 | .110 |