



Micro Commercial Components



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**P4KE6.8(C)A
THRU
P4KE550(C)A**

Features

- Halogen free available upon request by adding suffix "-HF"
- Unidirectional And Bidirectional
- Low Zener Imdepance
- High Temp Soldering: 260°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
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note1) ("P"Suffix designates Compliant. See ordering information)

**400 Watt
Transient Voltage
Suppressors
6.8 to 550 Volts**

Maximum Ratings

- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C
- P_{PPM}=400 Watt (Peak Pulse Power Dissipation at Ta=25 °C)
- Response Time 1 x 10⁻¹² Seconds For Unidirectional and 5 x 10⁻⁹ For Bidirectional
- P_{M(AV)}=1W(Steady state Power Dissipation at TL=75°C)
- IFSM=40A(Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed On Rated Load.

DO-41

The diagram shows a side view of a DO-41 package. Dimension A is the height of the main body. Dimension B is the diameter of the main body. Dimension C is the diameter of the lead. Dimension D is the total height including the lead. A cathode mark is shown on the main body.

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

Mechanical Data

- UL Recognized File # E331408
- Polarity :Color band denotes cathodes except Bipolar
- Mounting position :Any
- Weight :0.012ounce,0.3grams

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

Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig. 1 - Peak Pulse Power Rating Curve

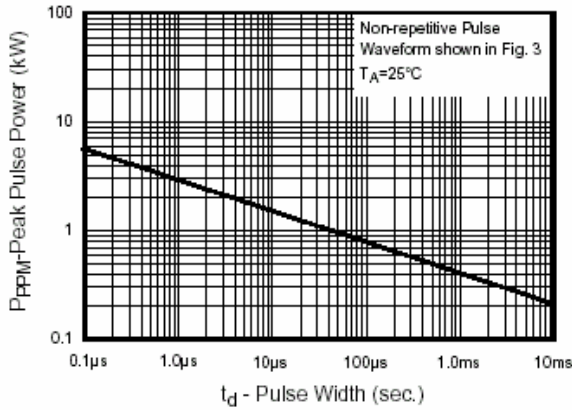


Fig.2 - Pulse Derating Curve

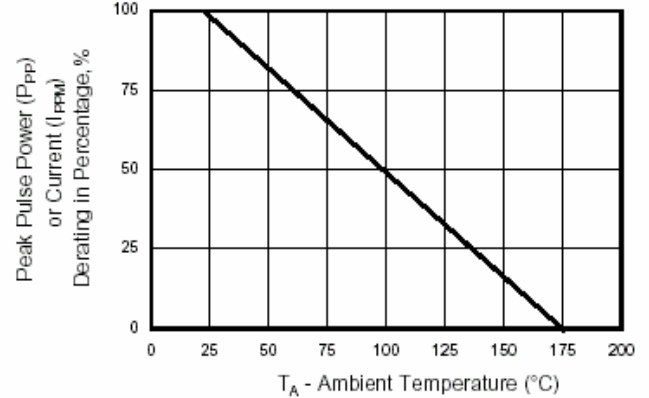


Fig.3 - Pulse Waveform

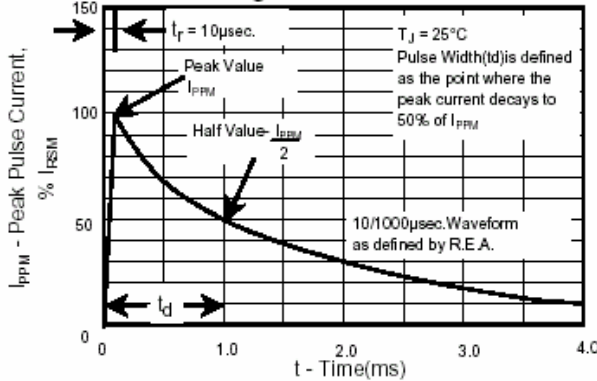


Fig.4 - Typ. Junction Capacitance Uni-Directional

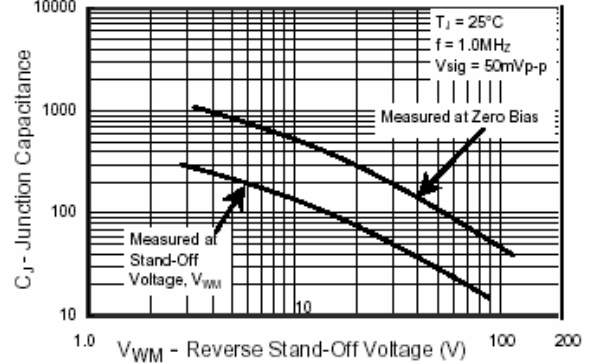


Fig.5 - steady State Power Derating Curve

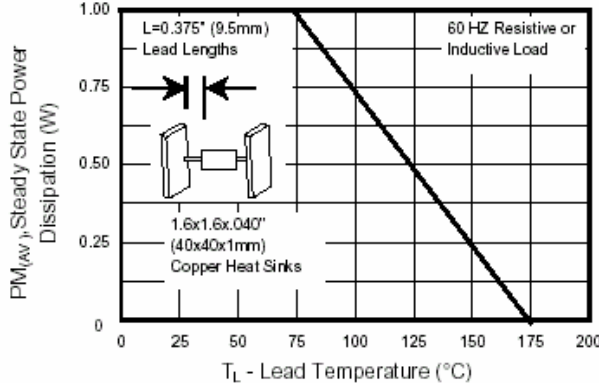


Fig.6 - Maximum Non-Repetitive Forward Surge Current Uni-Directional Only

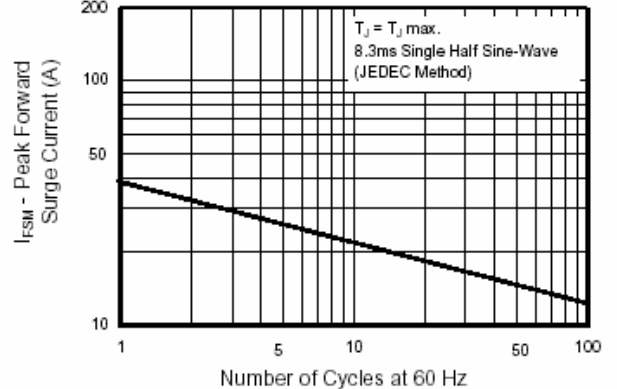


Fig.7 - Typical Reverse Leakage Characteristics

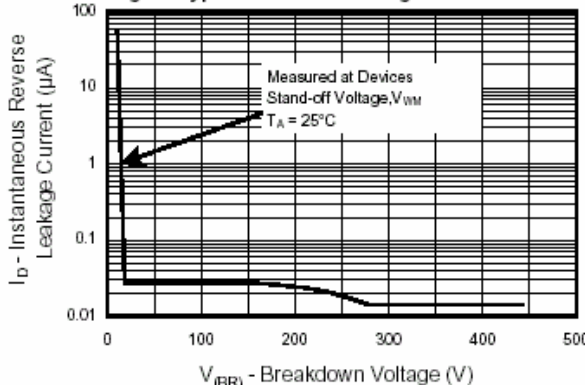
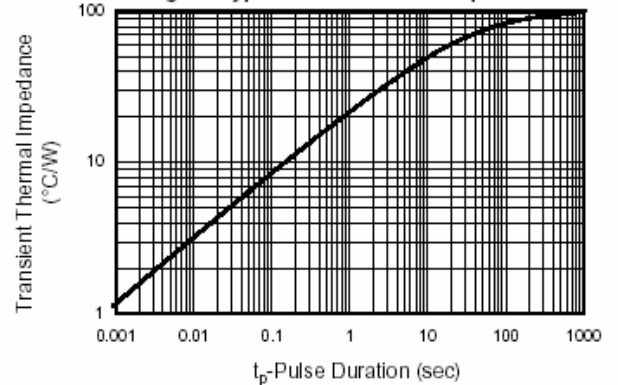


Fig. 8 - Typ. Transient Thermal Impedance



P4KE6.8A thru P4KE550A



ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

| MCC | | Breakdown Voltage | | TEST Current I _T | Reverse Standoff Voltage V _{WM} | Maximum Reverse Leakage I _R @V _{WM} | Maximum Clamping Voltage V _c @I _{pp} | Maximum Peak Pluse Current (I _{pp}) | Maximum Temperature Coefficient Of V _(BR) |
|-------------|-----------|---|-------|-----------------------------|--|---|--|---|--|
| Part Number | | V _(BR) @I _T (Volts) | | | | | | | |
| Uni-Polar | Bi-Polar | Min | Max | mA(DC) | V | uA | V | A | (%/°C) |
| P4KE6.8A | P4KE6.8CA | 6.45 | 7.14 | 10 | 5.8 | 1000 | 10.5 | 39 | 0.057 |
| P4KE7.5A | P4KE7.5CA | 7.13 | 7.88 | 10 | 6.4 | 500 | 11.3 | 36.3 | 0.061 |
| P4KE8.2A | P4KE8.2CA | 7.79 | 8.61 | 10 | 7.02 | 200 | 12.1 | 33.9 | 0.060 |
| P4KE9.1A | P4KE9.1CA | 8.65 | 9.55 | 1 | 7.78 | 50 | 13.4 | 30.6 | 0.068 |
| P4KE10A | P4KE10CA | 9.5 | 10.5 | 1 | 8.55 | 10 | 14.5 | 28.3 | 0.073 |
| P4KE11A | P4KE11CA | 10.5 | 11.6 | 1 | 9.4 | 5 | 15.6 | 26.3 | 0.075 |
| P4KE12A | P4KE12CA | 11.4 | 12.6 | 1 | 10.2 | 5 | 16.7 | 24.6 | 0.078 |
| P4KE13A | P4KE13CA | 12.4 | 13.7 | 1 | 11.1 | 1 | 18.2 | 22.5 | 0.081 |
| P4KE15A | P4KE15CA | 14.3 | 15.8 | 1 | 12.8 | 1 | 21.2 | 19.3 | 0.084 |
| P4KE16A | P4KE16CA | 15.2 | 16.8 | 1 | 13.6 | 1 | 22.5 | 18.2 | 0.086 |
| P4KE18A | P4KE18CA | 17.1 | 18.9 | 1 | 15.3 | 1 | 25.5 | 16.1 | 0.088 |
| P4KE20A | P4KE20CA | 19 | 21 | 1 | 17.1 | 1 | 27.7 | 14.8 | 0.090 |
| P4KE22A | P4KE22CA | 20.9 | 23.1 | 1 | 18.8 | 1 | 30.6 | 13.4 | 0.092 |
| P4KE24A | P4KE24CA | 22.8 | 25.2 | 1 | 20.5 | 1 | 33.2 | 12.3 | 0.094 |
| P4KE27A | P4KE27CA | 25.7 | 28.4 | 1 | 23.1 | 1 | 37.5 | 10.9 | 0.096 |
| P4KE30A | P4KE30CA | 28.5 | 31.5 | 1 | 25.6 | 1 | 41.4 | 9.9 | 0.097 |
| P4KE33A | P4KE33CA | 31.4 | 34.7 | 1 | 28.2 | 1 | 45.7 | 9 | 0.098 |
| P4KE36A | P4KE36CA | 34.2 | 37.8 | 1 | 30.8 | 1 | 49.9 | 8.2 | 0.099 |
| P4KE39A | P4KE39CA | 37.1 | 41 | 1 | 33.3 | 1 | 53.9 | 7.6 | 0.100 |
| P4KE43A | P4KE43CA | 40.9 | 45.2 | 1 | 36.8 | 1 | 59.3 | 6.9 | 0.101 |
| P4KE47A | P4KE47CA | 44.7 | 49.4 | 1 | 40.2 | 1 | 64.8 | 6.3 | 0.101 |
| P4KE51A | P4KE51CA | 48.5 | 53.6 | 1 | 43.6 | 1 | 70.1 | 5.8 | 0.102 |
| P4KE56A | P4KE56CA | 53.2 | 58.8 | 1 | 47.8 | 1 | 77 | 5.3 | 0.103 |
| P4KE62A | P4KE62CA | 58.9 | 65.1 | 1 | 53 | 1 | 85 | 4.8 | 0.104 |
| P4KE68A | P4KE68CA | 64.6 | 71.4 | 1 | 58.1 | 1 | 92 | 4.5 | 0.104 |
| P4KE75A | P4KE75CA | 71.3 | 78.8 | 1 | 64.1 | 1 | 103 | 4 | 0.105 |
| P4KE82A | P4KE82CA | 77.9 | 86.1 | 1 | 70.1 | 1 | 113 | 3.6 | 0.105 |
| P4KE91A | P4KE91CA | 86.5 | 95.5 | 1 | 77.8 | 1 | 125 | 3.3 | 0.106 |
| P4KE100A | P4KE100CA | 95 | 105 | 1 | 85.5 | 1 | 137 | 3 | 0.106 |
| P4KE110A | P4KE110CA | 105 | 116 | 1 | 94 | 1 | 152 | 2.7 | 0.107 |
| P4KE120A | P4KE120CA | 114 | 126 | 1 | 102 | 1 | 165 | 2.5 | 0.107 |
| P4KE130A | P4KE130CA | 124 | 137 | 1 | 111 | 1 | 179 | 2.3 | 0.107 |
| P4KE150A | P4KE150CA | 143 | 158 | 1 | 128 | 1 | 207 | 2 | 0.108 |
| P4KE160A | P4KE160CA | 152 | 168 | 1 | 136 | 1 | 219 | 1.9 | 0.108 |
| P4KE170A | P4KE170CA | 162 | 179 | 1 | 145 | 1 | 234 | 1.8 | 0.108 |
| P4KE180A | P4KE180CA | 171 | 189 | 1 | 154 | 1 | 246 | 1.7 | 0.108 |
| P4KE200A | P4KE200CA | 190 | 210 | 1 | 171 | 1 | 274 | 1.5 | 0.108 |
| P4KE220A | P4KE220CA | 209 | 231 | 1 | 185 | 1 | 328 | 1.3 | 0.108 |
| P4KE250A | P4KE250CA | 237 | 263 | 1 | 214 | 1 | 344 | 1.2 | 0.110 |
| P4KE300A | P4KE300CA | 285 | 315 | 1 | 256 | 1 | 414 | 1 | 0.110 |
| P4KE350A | P4KE350CA | 332 | 368 | 1 | 300 | 1 | 482 | 0.85 | 0.110 |
| P4KE400A | P4KE400CA | 380 | 420 | 1 | 342 | 1 | 548 | 0.75 | 0.110 |
| P4KE440A | P4KE440CA | 418 | 462 | 1 | 376 | 1 | 602 | 0.68 | 0.110 |
| P4KE480A | P4KE480CA | 456 | 504 | 1 | 408 | 1 | 658 | 0.61 | 0.110 |
| P4KE510A | P4KE510CA | 485 | 535 | 1 | 434 | 1 | 698 | 0.57 | 0.110 |
| P4KE530A | P4KE530CA | 503.5 | 556.5 | 1 | 477 | 1 | 725 | 0.55 | 0.110 |
| P4KE540A | P4KE540CA | 513 | 567 | 1 | 459 | 1 | 740 | 0.54 | 0.110 |
| P4KE550A | P4KE550CA | 522.5 | 577.5 | 1 | 495 | 1 | 760 | 0.52 | 0.110 |

Notes: For bidirectional types having V_{wm} of 10 Volts and less, the I_R limit is double.
For parts without A, the V_{BR} is +/- 10%.



TM

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Ordering Information :

| Device | Packing |
|----------------|------------------------------|
| Part Number-TP | Tape&Reel: 5Kpcs/Reel |
| Part Number-AP | Ammo Packing: 5Kpcs/Ammo Box |
| Part Number-BP | Bulk: 50Kpcs/Carton |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



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