Micro Commercial Components

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20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

# P6KE6.8 THRU P6KE540(C)A

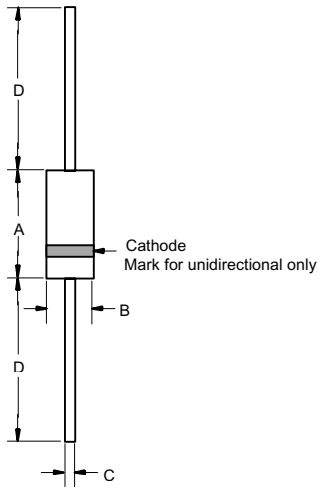
## 600WATTS TRANSIENT VOLTAGE SUPPRESSOR 6.8 TO 540 VOLTS

## Features

- Economical series
- Available in both unidirectional and bidirectionalconstruction and suffix"C" designates bidirectional type
- Lead Free Finish/Rohs Compliant (Note1) ("P"Suffix designates Compliant. See ordering information)
- 600 watts peak pulse power dissipation and 5.8~459V $V_{WM}$
- UL Recognized File # E222849

- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- **POLARITY:** Banded denotes cathode. Bidirectional not marked.
- **WEIGHT:** 0.4 Gram(Appx.).
- **MOUNTING POSITION:** Any.

DO-15




| DIMENSIONS | | | | | |
|---|---|---|---|---|---|
| | INCHES | | MM | | |
| DIM | MIN | MAX | MIN | MAX | NOTE |
| A | .230 | .300 | 5.80 | 7.60 | |
| B | .104 | .140 | 2.60 | 3.60 | |
| C | .028 | .034 | .70 | .90 | |
| D | 1.000 | --- | 25.40 | --- | |

## Maximum Ratings

Peak Pulse Power Dissipation at 25°C: 600Watts

Steady State Power Dissipatoin:5 Watts at $T_L$=75 °C

3/8" Lead Length

$t_{clamping}$ (0 Volts to BV Min.):

Unidirectional<$1x10^{-12}$ Seconds; Bidirectoinal<$5x10^{-9}$ Seconds.

Operating and Storage Temperature: -55°C to +175°C

## APPLICATION

Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on ICs, MOSFET, signal lines of sensor units for consumer, computer, industrial, automotive and telecommunication.

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

## RATINGS AND CHARACTERISTICS CURVES

($T_A$ = 25 ∀C unless otherwise noted)

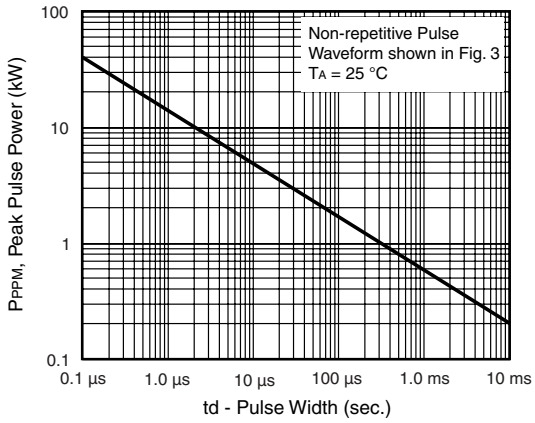



Figure 1. Peak Pulse Power Rating Curve

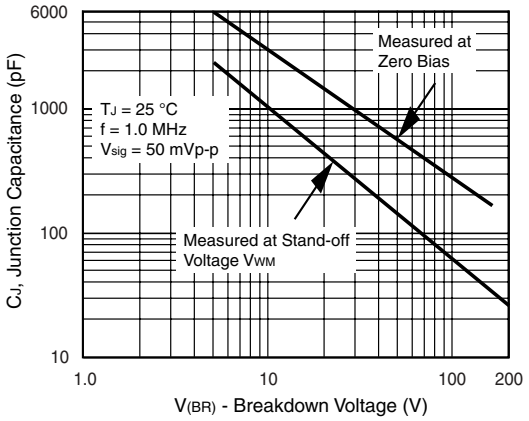



Figure 4. Typical Junction Capacitance Uni-Directional

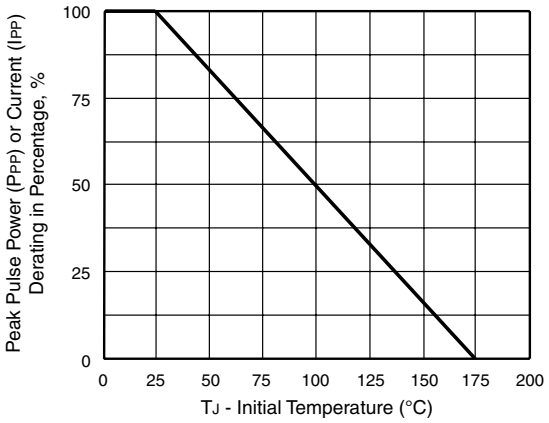



Figure 2. Pulse Power or Current versus Initial Junction Temperature

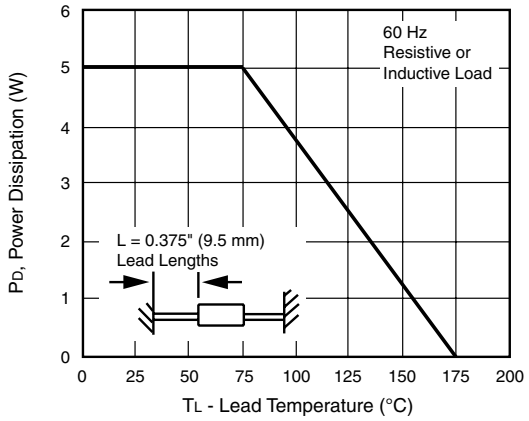



Figure 5. Power Derating Curve

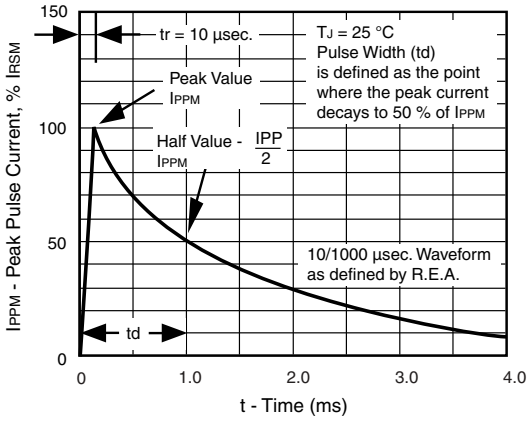



Figure 3. Pulse Waveform

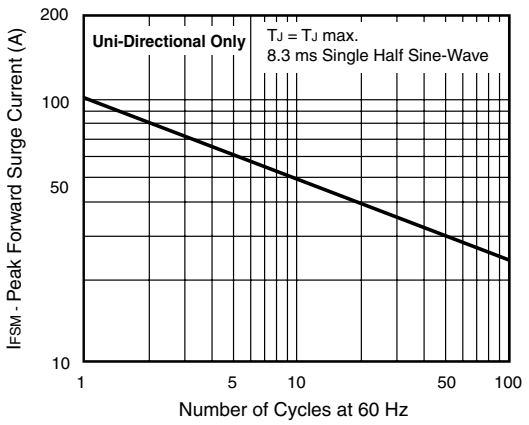



Figure 6. Maximum Non-Repetitive Forward Surge Current

| 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 | mADC | V | (µA) | V | A | % / °C |
| P6KE6.8 | 6.12 | 6.8 | 7.48 | 10 | 5.5 | 1000 | 10.8 | 56 | .057 |
| P6KE6.8A | 6.45 | 6.8 | 7.14 | 10 | 5.8 | 1000 | 10.5 | 57 | .057 |
| P6KE7.5 | 6.75 | 7.5 | 8.25 | 10 | 6.05 | 500 | 11.7 | 51 | .061 |
| P6KE7.5A | 7.13 | 7.5 | 7.88 | 10 | 6.4 | 500 | 11.3 | 53 | .061 |
| P6KE8.2 | 7.38 | 8.2 | 9.02 | 10 | 6.63 | 200 | 12.5 | 48 | .065 |
| P6KE8.2A | 7.79 | 8.2 | 8.61 | 10 | 7.02 | 200 | 12.1 | 50 | .065 |
| P6KE9.1 | 8.19 | 9.1 | 10 | 1 | 7.37 | 50 | 13.8 | 44 | .068 |
| P6KE9.1A | 8.65 | 9.1 | 9.55 | 1 | 7.78 | 50 | 13.4 | 45 | .068 |
| P6KE10 | 9.0 | 10 | 11 | 1 | 8.1 | 10 | 15 | 40 | .073 |
| P6KE10A | 9.5 | 10 | 10.5 | 1 | 8.55 | 10 | 14.5 | 41 | .073 |
| P6KE11 | 9.9 | 11 | 12.1 | 1 | 8.92 | 5 | 16.2 | 37 | .075 |
| P6KE11A | 10.5 | 11 | 11.6 | 1 | 9.4 | 5 | 15.6 | 38 | .075 |
| P6KE12 | 10.8 | 12 | 13.2 | 1 | 9.72 | 5 | 17.3 | 35 | .078 |
| P6KE12A | 11.4 | 12 | 12.6 | 1 | 10.2 | 5 | 16.7 | 36 | .078 |
| P6KE13 | 11.7 | 13 | 14.3 | 1 | 10.5 | 5 | 19 | 32 | .081 |
| P6KE13A | 12.4 | 13 | 13.7 | 1 | 11.1 | 5 | 18.2 | 33 | .081 |
| P6KE15 | 13.5 | 15 | 16.5 | 1 | 12.1 | 5 | 22 | 27 | .084 |
| P6KE15A | 14.3 | 15 | 15.8 | 1 | 12.8 | 5 | 21.2 | 28 | .084 |
| P6KE16 | 14.4 | 16 | 17.6 | 1 | 12.9 | 5 | 23.5 | 26 | .086 |
| P6KE16A | 15.2 | 16 | 16.8 | 1 | 13.6 | 5 | 22.5 | 27 | .086 |
| P6KE18 | 16.2 | 18 | 19.8 | 1 | 14.5 | 5 | 26.5 | 23 | .088 |
| P6KE18A | 17.1 | 18 | 18.9 | 1 | 15.3 | 5 | 25.2 | 24 | .088 |
| P6KE20 | 18 | 20 | 22 | 1 | 16.2 | 5 | 29.1 | 21 | .090 |
| P6KE20A | 19 | 20 | 21 | 1 | 17.1 | 5 | 27.7 | 22 | .090 |
| P6KE22 | 19.8 | 22 | 24.2 | 1 | 17.8 | 5 | 31.9 | 19 | .092 |
| P6KE22A | 20.9 | 22 | 23.1 | 1 | 18.8 | 5 | 30.6 | 20 | .092 |
| P6KE24 | 21.6 | 24 | 26.4 | 1 | 19.4 | 5 | 34.7 | 17 | .094 |
| P6KE24A | 22.8 | 24 | 25.2 | 1 | 20.5 | 5 | 33.2 | 18 | .094 |
| P6KE27 | 24.3 | 27 | 29.7 | 1 | 21.8 | 5 | 39.1 | 15 | .096 |
| P6KE27A | 25.7 | 27 | 28.4 | 1 | 23.1 | 5 | 37.5 | 16 | .096 |
| P6KE30 | 27 | 30 | 33 | 1 | 24.3 | 5 | 43.5 | 14 | .097 |
| P6KE30A | 28.5 | 30 | 31.5 | 1 | 25.6 | 5 | 41.4 | 14.4 | .097 |
| P6KE33 | 29.7 | 33 | 36.3 | 1 | 26.8 | 5 | 47.7 | 12.6 | .098 |
| P6KE33A | 31.4 | 33 | 34.7 | 1 | 28.2 | 5 | 45.7 | 13.2 | .098 |
| P6KE36 | 32.4 | 36 | 39.6 | 1 | 29.1 | 5 | 52 | 11.6 | .099 |
| P6KE36A | 34.2 | 36 | 37.8 | 1 | 30.8 | 5 | 49.9 | 12 | .099 |
| P6KE39 | 35.1 | 39 | 42.9 | 1 | 31.6 | 5 | 56.4 | 10.6 | .100 |
| P6KE39A | 37.1 | 39 | 41 | 1 | 33.3 | 5 | 53.9 | 11.2 | .100 |
| P6KE43 | 38.7 | 43 | 47.3 | 1 | 34.8 | 5 | 61.9 | 9.6 | .101 |
| P6KE43A | 40.9 | 43 | 45.2 | 1 | 36.8 | 5 | 59.3 | 10.1 | .101 |
| P6KE47 | 42.3 | 47 | 51.7 | 1 | 38.1 | 5 | 67.8 | 8.9 | .101 |
| P6KE47A | 44.7 | 47 | 49.4 | 1 | 40.2 | 5 | 64.8 | 9.3 | .101 |
| P6KE51 | 45.9 | 51 | 56.1 | 1 | 41.3 | 5 | 73.5 | 8.2 | .102 |
| P6KE51A | 48.5 | 51 | 53.6 | 1 | 43.6 | 5 | 70.1 | 8.6 | .102 |
| P6KE56 | 50.4 | 56 | 61.6 | 1 | 45.4 | 5 | 80.5 | 7.4 | .103 |
| P6KE56A | 53.2 | 56 | 58.8 | 1 | 47.8 | 5 | 77 | 7.8 | .103 |
| P6KE62 | 55.8 | 62 | 68.2 | 1 | 50.2 | 5 | 89 | 6.8 | .104 |
| P6KE62A | 58.9 | 62 | 65.1 | 1 | 53 | 5 | 85 | 7.1 | .104 |
| P6KE68 | 61.2 | 68 | 74.8 | 1 | 55.1 | 5 | 98 | 6.1 | .104 |
| P6KE68A | 64.6 | 68 | 71.4 | 1 | 58.1 | 5 | 92 | 6.5 | .104 |

| 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 | mADC | V | (µA) | V | A | % / °C |
| P6KE75 | 67.5 | 75 | 82.5 | 1 | 60.7 | 5 | 108 | 5.5 | .105 |
| P6KE75A | 71.3 | 75 | 78.8 | 1 | 64.1 | 5 | 103 | 5.8 | .105 |
| P6KE82 | 73.8 | 82 | 90.2 | 1 | 66.4 | 5 | 118 | 5.1 | .105 |
| P6KE82A | 77.9 | 82 | 86.1 | 1 | 70.1 | 5 | 113 | 5.3 | .105 |
| P6KE91 | 81.9 | 91 | 100 | 1 | 73.7 | 5 | 131 | 4.5 | .106 |
| P6KE91A | 86.5 | 91 | 95.5 | 1 | 77.8 | 5 | 125 | 4.8 | .106 |
| P6KE100 | 90 | 100 | 110 | 1 | 81 | 5 | 144 | 4.2 | .106 |
| P6KE100A | 95 | 100 | 105 | 1 | 85.5 | 5 | 137 | 4.4 | .106 |
| P6KE110 | 99 | 110 | 121 | 1 | 89.2 | 5 | 158 | 3.8 | .107 |
| P6KE110A | 105 | 110 | 116 | 1 | 94 | 5 | 152 | 4.0 | .107 |
| P6KE120 | 108 | 120 | 132 | 1 | 97.2 | 5 | 173 | 3.5 | .107 |
| P6KE120A | 114 | 120 | 126 | 1 | 102 | 5 | 165 | 3.6 | .107 |
| P6KE130 | 117 | 130 | 143 | 1 | 105 | 5 | 187 | 3.2 | .108 |
| P6KE130A | 124 | 130 | 137 | 1 | 111 | 5 | 179 | 3.3 | .108 |
| P6KE150 | 135 | 150 | 165 | 1 | 121 | 5 | 215 | 2.8 | .108 |
| P6KE150A | 143 | 150 | 158 | 1 | 128 | 5 | 207 | 2.9 | .108 |
| P6KE160 | 144 | 160 | 176 | 1 | 130 | 5 | 230 | 2.6 | .108 |
| P6KE160A | 152 | 160 | 168 | 1 | 136 | 5 | 219 | 2.7 | .108 |
| P6KE170 | 153 | 170 | 187 | 1 | 138 | 5 | 244 | 2.5 | .108 |
| P6KE170A | 161 | 170 | 179 | 1 | 145 | 5 | 234 | 2.6 | .108 |
| P6KE180 | 162 | 180 | 198 | 1 | 146 | 5 | 258 | 2.3 | .108 |
| P6KE180A | 171 | 180 | 189 | 1 | 154 | 5 | 246 | 2.4 | .108 |
| P6KE200 | 180 | 200 | 220 | 1 | 162 | 5 | 287 | 2.1 | .108 |
| P6KE200A | 190 | 200 | 210 | 1 | 171 | 5 | 274 | 2.2 | .108 |
| P6KE220 | 198 | 220 | 242 | 1 | 175 | 5 | 344 | 1.8 | .108 |
| P6KE220A | 209 | 220 | 231 | 1 | 185 | 5 | 328 | 1.9 | .108 |
| P6KE250 | 225 | 250 | 275 | 1 | 202 | 5 | 360 | 1.7 | .110 |
| P6KE250A | 237 | 250 | 263 | 1 | 214 | 5 | 344 | 1.8 | .110 |
| P6KE300 | 270 | 300 | 330 | 1 | 243 | 5 | 430 | 1.4 | .110 |
| P6KE300A | 285 | 300 | 315 | 1 | 256 | 5 | 414 | 1.5 | .110 |
| P6KE350 | 315 | 350 | 385 | 1 | 284 | 5 | 504 | 1.2 | .110 |
| P6KE350A | 332 | 350 | 368 | 1 | 300 | 5 | 482 | 1.3 | .110 |
| P6KE400 | 360 | 400 | 440 | 1 | 324 | 5 | 574 | 1.05 | .110 |
| P6KE400A | 380 | 400 | 420 | 1 | 342 | 5 | 548 | 1.1 | .110 |
| P6KE440 | 396 | 440 | 484 | 1 | 356 | 5 | 631 | 0.99 | .110 |
| P6KE440A | 418 | 440 | 462 | 1 | 376 | 5 | 600 | 1.04 | .110 |
| P6KE480 | 432 | 480 | 528 | 1 | 389 | 5 | 686 | 0.88 | .110 |
| P6KE480A | 456 | 480 | 504 | 1 | 408 | 5 | 658 | 0.91 | .110 |
| P6KE510 | 459 | 510 | 561 | 1 | 413 | 5 | 729 | 0.82 | .110 |
| P6KE510A | 485 | 510 | 535 | 1 | 434 | 5 | 698 | 0.86 | .110 |
| P6KE540 | 486 | 510 | 594 | 1 | 437 | 5 | 772 | 0.78 | .110 |
| P6KE540A | 513 | 510 | 567 | 1 | 459 | 5 | 740 | 0.81 | .110 |

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

## Ordering Information :

| Device | Packing |
|---|---|
| Part Number-TP | Tape&Reel: 4Kpcs/Reel |
| Part Number-AP | Ammo Packing: 3Kpcs/Ammo Box |
| Part Number-BP | Bulk: 25Kpcs/Carton |

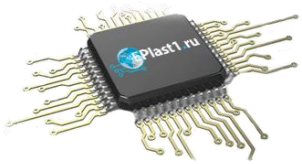
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.




**Как с нами связаться**

**Телефон:** 8 (812) 309 58 32 (многоканальный)
**Факс:** 8 (812) 320-02-42
**Электронная почта:** org@eplast1.ru
**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.