



瞬变电压抑制二极管 Transient Voltage Suppressor Diodes

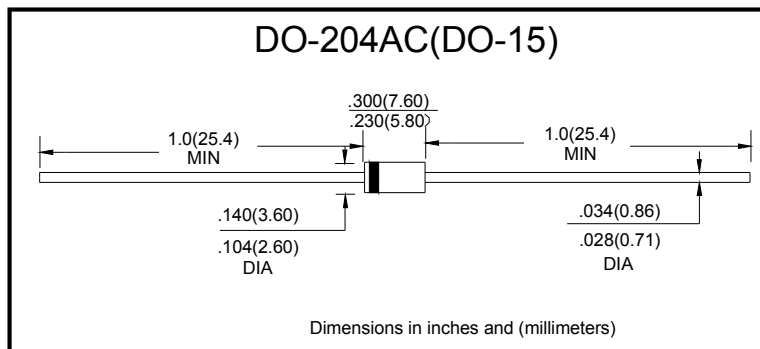
■特征 Features

- P_{PP} 600W
- V_{BR} 6.8V-600V

■用途 Applications

- 箝位电压用 Clamping Voltage

■外形尺寸和印记 Outline Dimensions and Mark



■极限值（绝对最大额定值）

Limiting Values (Absolute Maximum Rating)

| 参数名称 Item | 符号 Symbol | 单位 Unit | 条件 Conditions | 最大值 Max |
|---|--------------|------------|---|-------------------------|
| 最大损耗功率 Peak power dissipation | PPPM | W | 在10/1000us 波形下测试 with a 10/1000us waveform | 600 |
| 最大脉冲电流 Peak pulse current | IPPM | A | 在10/1000us 波形下测试 with a 10/1000us waveform | 见下面表格 See Next Table |
| 功率损耗 Power dissipation | PD | W | 无限散热片@ TL=75℃ on infinite heat sink at TL=75℃ | 5 |
| 最大正向浪涌电流 Peak forward surge current | IFSM | A | 8.3ms正弦半波, 仅单向型 8.3 ms single half sine-wave unidirectional only | 100 |
| 工作结温和存储温度范围 Operating junction and storage temperature range | TJ,TSTG | ℃ | | -55 to +150 |

■电特性（Ta=25℃ 除非另有规定）

Electrical Characteristics (Ta=25℃ Unless otherwise specified)

| 参数名称 Item | 符号 Symbol | 单位 Unit | 条件 Conditions | 最大值 Max |
|---|------------------|------------|---|------------|
| 最大瞬间正向电压 (1) Maximum instantaneous forward Voltage (1) | VF | V | 在25A下测试, 仅单向型 at 25A for unidirectional only | 3.5/5.0 |
| 典型热阻 Thermal resistance | R _{θJL} | ℃/W | 结到引线 junction to lead | 20 |
| | R _{θJA} | ℃/W | 结到环境 junction to ambient | 75 |

备注: Notes:

- VF=3.5V适用于P6KE220(A)及其以下型号; VF=5.0V适用于P6KE250(A)及其以上型号
VF = 3.5 V for P6KE220(A) and below; VF = 5.0 V for P6KE250(A) and above



P6KE SERIES

■电性参数 (TA=25℃ 除非另有规定)

Electrical Characteristics (TA=25℃ unless otherwise noted)

| 产品型号 (单向) Part Number(U ni) | 产品型号 (双向) Part Number(Bi) | 击穿电压 $V_{BR@I_T}$ Breakdown Voltage $V_{BR@I_T}$ | | | 最大反向漏电 流 I_R Maximum Reverse Leakage $I_R@$ $V_{WM}(\mu A)$ | 最大工作电压 V_{RWM} Working Peak Reverse Voltage $V_{RWM}(V)$ | 最大反向浪涌 电流 IPP Maximum Reverse Surge Current IPP (A) | 最大箝位电压 Maximum Clamping Voltage V_c @ I_{PP} (V) |
|---|------------------------------------|---|---------------|-------------------|--|---|--|---|
| | | 最小 Min(V) | 最大 Max (V) | 测试电流 $I_T(mA)$ | | | | |
| P6KE6.8 | P6KE6.8C | 6.12 | 7.48 | 10 | 1000 | 5.50 | 55.6 | 10.8 |
| P6KE6.8A | P6KE6.8CA | 6.45 | 7.14 | 10 | 1000 | 5.80 | 57.1 | 10.5 |
| P6KE7.5 | P6KE7.5C | 6.75 | 8.25 | 10 | 500 | 6.05 | 51.3 | 11.7 |
| P6KE7.5A | P6KE7.5CA | 7.13 | 7.88 | 10 | 500 | 6.40 | 53.1 | 11.3 |
| P6KE8.2 | P6KE8.2C | 7.38 | 9.02 | 10 | 200 | 6.63 | 48.0 | 12.5 |
| P6KE8.2A | P6KE8.2CA | 7.79 | 8.61 | 10 | 200 | 7.02 | 49.6 | 12.1 |
| P6KE9.1 | P6KE9.1C | 8.19 | 10.0 | 1.0 | 50 | 7.37 | 43.5 | 13.8 |
| P6KE9.1A | P6KE9.1CA | 8.65 | 9.55 | 1.0 | 50 | 7.78 | 44.8 | 13.4 |
| P6KE10 | P6KE10C | 9.00 | 11.0 | 1.0 | 10 | 8.10 | 40.0 | 15 |
| P6KE10A | P6KE10CA | 9.50 | 10.5 | 1.0 | 10 | 8.55 | 41.4 | 14.5 |
| P6KE11 | P6KE11C | 9.90 | 12.1 | 1.0 | 5.0 | 8.92 | 37.0 | 16.2 |
| P6KE11A | P6KE11CA | 10.5 | 11.6 | 1.0 | 5.0 | 9.40 | 38.5 | 15.6 |
| P6KE12 | P6KE12C | 10.8 | 13.2 | 1.0 | 5.0 | 9.72 | 34.7 | 17.3 |
| P6KE12A | P6KE12CA | 11.4 | 12.6 | 1.0 | 5.0 | 10.2 | 35.9 | 16.7 |
| P6KE13 | P6KE13C | 11.7 | 14.3 | 1.0 | 5.0 | 10.5 | 31.6 | 19 |
| P6KE13A | P6KE13CA | 12.4 | 13.7 | 1.0 | 5.0 | 11.1 | 33.0 | 18.2 |
| P6KE15 | P6KE15C | 13.5 | 16.5 | 1.0 | 5.0 | 12.1 | 27.3 | 22 |
| P6KE15A | P6KE15CA | 14.3 | 15.8 | 1.0 | 5.0 | 12.8 | 28.3 | 21.2 |
| P6KE16 | P6KE16C | 14.4 | 17.6 | 1.0 | 5.0 | 12.9 | 25.5 | 23.5 |
| P6KE16A | P6KE16CA | 15.2 | 16.8 | 1.0 | 5.0 | 13.6 | 26.7 | 22.5 |
| P6KE18 | P6KE18C | 16.2 | 19.8 | 1.0 | 5.0 | 14.5 | 22.6 | 26.5 |
| P6KE18A | P6KE18CA | 17.1 | 18.9 | 1.0 | 5.0 | 15.3 | 23.8 | 25.2 |
| P6KE20 | P6KE20C | 18.0 | 22.0 | 1.0 | 5.0 | 16.2 | 20.6 | 29.1 |
| P6KE20A | P6KE20CA | 19.0 | 21.0 | 1.0 | 5.0 | 17.1 | 21.7 | 27.7 |
| P6KE22 | P6KE22C | 19.8 | 24.2 | 1.0 | 5.0 | 17.8 | 18.8 | 31.9 |
| P6KE22A | P6KE22CA | 20.9 | 23.1 | 1.0 | 5.0 | 18.8 | 19.6 | 30.6 |
| P6KE24 | P6KE24C | 21.6 | 26.4 | 1.0 | 5.0 | 19.4 | 17.3 | 34.7 |
| P6KE24A | P6KE24CA | 22.8 | 25.2 | 1.0 | 5.0 | 20.5 | 18.1 | 33.2 |
| P6KE27 | P6KE27C | 24.3 | 29.7 | 1.0 | 5.0 | 21.8 | 15.3 | 39.1 |
| P6KE27A | P6KE27CA | 25.7 | 28.4 | 1.0 | 5.0 | 23.1 | 16.0 | 37.5 |
| P6KE30 | P6KE30C | 27.0 | 33.0 | 1.0 | 5.0 | 24.3 | 13.8 | 43.5 |
| P6KE30A | P6KE30CA | 28.5 | 31.5 | 1.0 | 5.0 | 25.6 | 14.5 | 41.4 |
| P6KE33 | P6KE33C | 29.7 | 36.3 | 1.0 | 5.0 | 26.8 | 12.6 | 47.7 |
| P6KE33A | P6KE33CA | 31.4 | 34.7 | 1.0 | 5.0 | 28.2 | 13.1 | 45.7 |
| P6KE36 | P6KE36C | 32.4 | 39.6 | 1.0 | 5.0 | 29.1 | 11.5 | 52 |
| P6KE36A | P6KE36CA | 34.2 | 37.8 | 1.0 | 5.0 | 30.8 | 12.0 | 49.9 |



P6KE SERIES

■ 电性参数 (TA=25°C 除非另有规定)

Electrical Characteristics (TA=25°C unless otherwise noted)

| 产品型号 (单向) Part Number(Uni) | 产品型号 (双向) Part Number(Bi) | 击穿电压 $V_{BR}@I_T$ Breakdown Voltage $V_{BR}@I_T$ | | | 最大反向漏电流 I_R Maximum Reverse Leakage $I_R @$ V_{RWM} (μA) | 最大工作电压 V_{RWM} Working Peak Reverse Voltage $V_{RWM}(V)$ | 最大反向浪涌 电流 IPP Maximum Reverse Surge Current IPP (A) | 最大箝位电压 Maximum Clamping Voltage V_c @ I_{PP} (V) |
|-------------------------------------|------------------------------------|---|---------------|------------------------|---|---|--|---|
| | | 最小 Min(V) | 最大 Max (V) | 测试电 流 I_T (mA) | | | | |
| P6KE39 | P6KE39C | 35.1 | 42.9 | 1.0 | 5.0 | 31.6 | 10.6 | 56.4 |
| P6KE39A | P6KE39CA | 37.1 | 41.0 | 1.0 | 5.0 | 33.3 | 11.1 | 53.9 |
| P6KE43 | P6KE43C | 38.7 | 47.3 | 1.0 | 5.0 | 34.8 | 9.7 | 61.9 |
| P6KE43A | P6KE43CA | 40.9 | 45.2 | 1.0 | 5.0 | 36.8 | 10.1 | 59.3 |
| P6KE47 | P6KE47C | 42.3 | 51.7 | 1.0 | 5.0 | 38.1 | 8.8 | 67.8 |
| P6KE47A | P6KE47CA | 44.7 | 49.4 | 1.0 | 5.0 | 40.2 | 9.3 | 64.8 |
| P6KE51 | P6KE51C | 45.9 | 56.1 | 1.0 | 5.0 | 41.3 | 8.2 | 73.5 |
| P6KE51A | P6KE51CA | 48.5 | 53.6 | 1.0 | 5.0 | 43.6 | 8.6 | 70.1 |
| P6KE56 | P6KE56C | 50.4 | 61.6 | 1.0 | 5.0 | 45.4 | 7.5 | 80.5 |
| P6KE56A | P6KE56CA | 53.2 | 58.8 | 1.0 | 5.0 | 47.8 | 7.8 | 77 |
| P6KE62 | P6KE62C | 55.8 | 68.2 | 1.0 | 5.0 | 50.2 | 6.7 | 89 |
| P6KE62A | P6KE62CA | 58.9 | 65.1 | 1.0 | 5.0 | 53.0 | 7.1 | 85 |
| P6KE68 | P6KE68C | 61.2 | 74.8 | 1.0 | 5.0 | 55.1 | 6.1 | 98 |
| P6KE68A | P6KE68CA | 64.6 | 71.4 | 1.0 | 5.0 | 58.1 | 6.5 | 92 |
| P6KE75 | P6KE75C | 67.5 | 82.5 | 1.0 | 5.0 | 60.7 | 5.6 | 108 |
| P6KE75A | P6KE75CA | 71.3 | 78.8 | 1.0 | 5.0 | 64.1 | 5.8 | 103 |
| P6KE82 | P6KE82C | 73.8 | 90.2 | 1.0 | 5.0 | 66.4 | 5.1 | 118 |
| P6KE82A | P6KE82CA | 77.9 | 86.1 | 1.0 | 5.0 | 70.1 | 5.3 | 113 |
| P6KE91 | P6KE91C | 81.9 | 100 | 1.0 | 5.0 | 73.7 | 4.6 | 131 |
| P6KE91A | P6KE91CA | 86.5 | 95.5 | 1.0 | 5.0 | 77.8 | 4.8 | 125 |
| P6KE100 | P6KE100C | 90.0 | 110 | 1.0 | 5.0 | 81.0 | 4.2 | 144 |
| P6KE100A | P6KE100CA | 95.0 | 105 | 1.0 | 5.0 | 85.5 | 4.4 | 137 |
| P6KE110 | P6KE110C | 99.0 | 121 | 1.0 | 5.0 | 89.2 | 3.8 | 158 |
| P6KE110A | P6KE110CA | 105 | 116 | 1.0 | 5.0 | 94.0 | 3.9 | 152 |
| P6KE120 | P6KE120C | 108 | 132 | 1.0 | 5.0 | 97.2 | 3.5 | 173 |
| P6KE120A | P6KE120CA | 114 | 126 | 1.0 | 5.0 | 102 | 3.6 | 165 |
| P6KE130 | P6KE130C | 117 | 143 | 1.0 | 5.0 | 105 | 3.2 | 187 |
| P6KE130A | P6KE130CA | 124 | 137 | 1.0 | 5.0 | 111 | 3.4 | 179 |
| P6KE150 | P6KE150C | 135 | 165 | 1.0 | 5.0 | 121 | 2.8 | 215 |
| P6KE150A | P6KE150CA | 143 | 158 | 1.0 | 5.0 | 128 | 2.9 | 207 |
| P6KE160 | P6KE160C | 144 | 176 | 1.0 | 5.0 | 130 | 2.6 | 230 |
| P6KE160A | P6KE160CA | 152 | 168 | 1.0 | 5.0 | 136 | 2.7 | 219 |
| P6KE170 | P6KE170C | 153 | 187 | 1.0 | 5.0 | 138 | 2.5 | 244 |
| P6KE170A | P6KE170CA | 162 | 179 | 1.0 | 5.0 | 145 | 2.6 | 234 |
| P6KE180 | P6KE180C | 162 | 198 | 1.0 | 5.0 | 146 | 2.3 | 258 |
| P6KE180A | P6KE180CA | 171 | 189 | 1.0 | 5.0 | 154 | 2.4 | 246 |



P6KE SERIES

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|-------------------------------------|------------------------------------|---|---------------|--------------------|--|---|--|---|
| | | 最小 Min(V) | 最大 Max (V) | 测试电 流 IT(mA) | | | | |
| P6KE200 | P6KE200C | 180 | 220 | 1.0 | 5.0 | 162 | 2.1 | 287 |
| P6KE200A | P6KE200CA | 190 | 210 | 1.0 | 5.0 | 171 | 2.2 | 274 |
| P6KE220 | P6KE220C | 198 | 242 | 1.0 | 5.0 | 175 | 1.7 | 344 |
| P6KE220A | P6KE220CA | 209 | 231 | 1.0 | 5.0 | 185 | 1.8 | 328 |
| P6KE250 | P6KE250C | 225 | 275 | 1.0 | 5.0 | 202 | 1.7 | 360 |
| P6KE250A | P6KE250CA | 237 | 263 | 1.0 | 5.0 | 214 | 1.7 | 344 |
| P6KE300 | P6KE300C | 270 | 330 | 1.0 | 5.0 | 243 | 1.4 | 430 |
| P6KE300A | P6KE300CA | 285 | 315 | 1.0 | 5.0 | 256 | 1.4 | 414 |
| P6KE350 | P6KE350C | 315 | 385 | 1.0 | 5.0 | 284 | 1.2 | 505 |
| P6KE350A | P6KE350CA | 333 | 368 | 1.0 | 5.0 | 300 | 1.2 | 482 |
| P6KE400 | P6KE400C | 360 | 440 | 1.0 | 5.0 | 324 | 1.0 | 574 |
| P6KE400A | P6KE400CA | 380 | 420 | 1.0 | 5.0 | 342 | 1.1 | 548 |
| P6KE440 | P6KE440C | 396 | 484 | 1.0 | 5.0 | 356 | 0.95 | 631 |
| P6KE440A | P6KE440CA | 418 | 462 | 1.0 | 5.0 | 376 | 1.0 | 602 |
| P6KE480 | P6KE480C | 432 | 528 | 1.0 | 5.0 | 389 | 0.83 | 723 |
| P6KE480A | P6KE480CA | 456 | 504 | 1.0 | 5.0 | 408 | 0.87 | 690 |
| P6KE500 | P6KE500C | 450 | 550 | 1.0 | 5.0 | 406 | 0.80 | 750 |
| P6KE500A | P6KE500CA | 475 | 525 | 1.0 | 5.0 | 427.5 | 0.84 | 714 |
| P6KE510 | P6KE510C | 459 | 561 | 1.0 | 5.0 | 413 | 0.78 | 769 |
| P6KE510A | P6KE510CA | 485 | 535 | 1.0 | 5.0 | 434 | 0.81 | 741 |
| P6KE520 | P6KE520C | 468 | 572 | 1.0 | 5.0 | 422.2 | 0.76 | 789 |
| P6KE520A | P6KE520CA | 494 | 546 | 1.0 | 5.0 | 444.6 | 0.79 | 759 |
| P6KE540 | P6KE540C | 486 | 594 | 1.0 | 5.0 | 437 | 0.69 | 870 |
| P6KE540A | P6KE540CA | 513 | 567 | 1.0 | 5.0 | 459 | 0.72 | 833 |
| P6KE550 | P6KE550C | 495 | 605 | 1.0 | 5.0 | 446.6 | 2.1 | 287 |
| P6KE550A | P6KE550CA | 522.5 | 577.5 | 1.0 | 5.0 | 470.3 | 2.2 | 274 |
| P6KE600 | P6KE600C | 540 | 660 | 1.0 | 5.0 | 487.2 | 1.7 | 344 |
| P6KE600A | P6KE600CA | 570 | 630 | 1.0 | 5.0 | 513 | 1.8 | 328 |



■特性曲线（典型） Characteristics(Typical)

图1: 最大脉冲功率曲线

FIG1: Peak Pulse Power Rating Curve

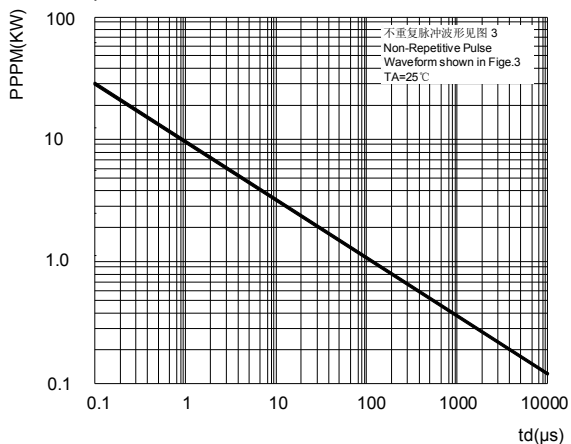


图2: 脉冲功率或电流与结温关系

FIG2: Pulse Power or Current vs. Initial Junction Temperature

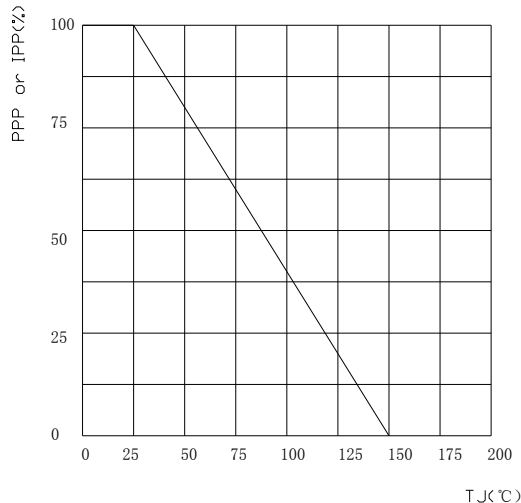


图3: 脉冲波形

FIG3: Pulse Waveform

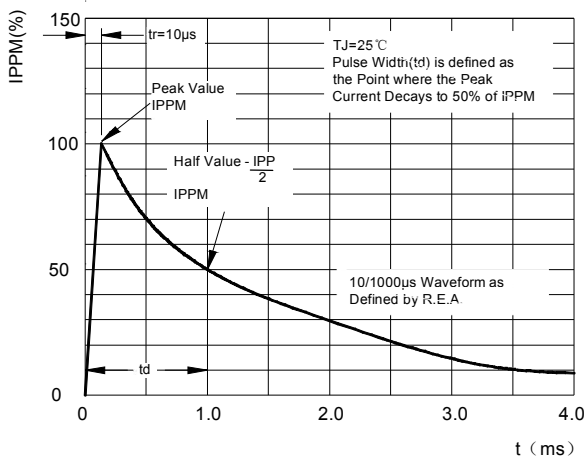


图4: 功率降额曲线

FIG4: Power Derating Curve

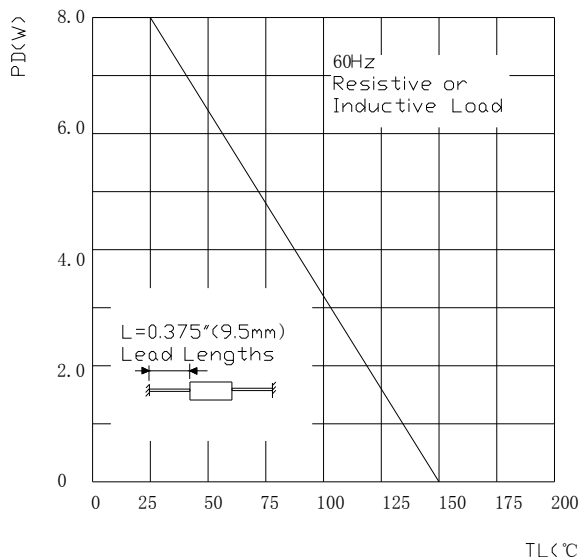


图5: 最大不重复浪涌电流

FIG5: Maximum Non-Repetitive Surge Current

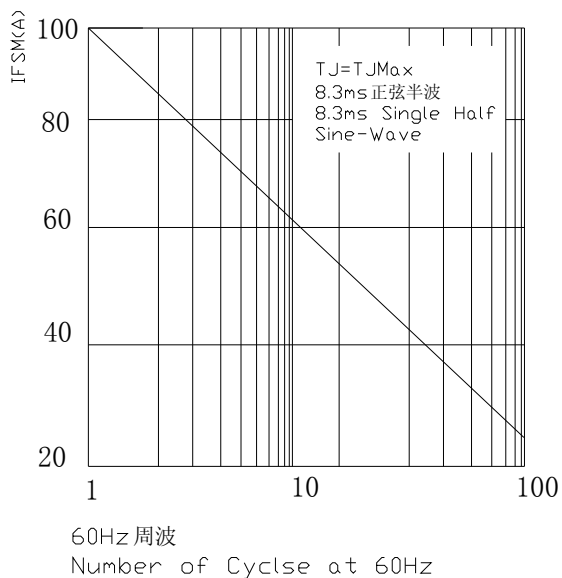


图6: 典型瞬态热阻

FIG6: Typical Transient Thermal Impedance

