

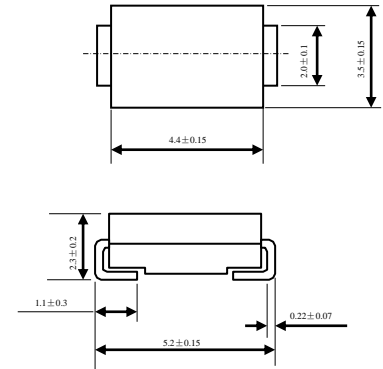
特 性:

- ◆ 600W 峰值脉冲功率
- ◆ 优良的箝制能力
- ◆ 较小的箝位因子
- ◆ 快速响应时间：从 0 V 到 V_{BR} ，单向型小于 1.0ps，双向型小于 5.0ns

机械性能:

- ◆ 封 装: 模塑封装
- ◆ 塑封材料: 用 UL94V-0 认可的阻燃环氧料
- ◆ 端 子: 镀锡
- ◆ 极 性: 色环表示阴极
- ◆ 安装位置: 任意

SMB / DO-214AA



600W 表面贴装 TVS

尺寸单位: inch (mm)

最大额定值及电气特性

测量环境温度为 25°C，除非另有规定。

| 参 数 名 称 | 符 号 | 额 定 值 | 单 位 |
|-----------------------------|----------------|------------|-----|
| 最大峰值脉冲功率 | P_{ppm} | 最小 600 | W |
| 最大峰值反向脉冲电流(注释 1) | I_{ppm} | 见表 | A |
| 稳态功率(注释 2) | $P_m (AV)$ | 5.0 | W |
| 最大峰值正向浪涌电流(注释 3) | I_{FSM} | 100 | A |
| 最大瞬态正向电压 @ 50 A 仅对单向型(注释 4) | V_F | 3.5 | V |
| 工作及储存温度 | T_J, T_{STG} | -55 ~ +175 | °C |

- 注 释：
1. 脉冲电流时间 10 / 1000 μs 。
 2. 在引线末端安装面积为 5.0mm²，厚 0.013mm 的散热铜片。
 3. 使用单相正弦半波，时间 10ms；或使用等效的方波，4 周波/分。



P6SMB Series

电特性 (测量环境温度为25°C, 除非另有规定)
ELECTRICAL CHARACTERISTICS (at TA=25 °C unless otherwise noted)

| 型号 TYPE | 标识代码 Marking | | 击穿电压 BREAKDOWN VOLTAGE | | 测试电流 TEST CURRENT | 变位电压 REVERSE STAND-OFF VOLTAGE | 最大反向漏电流 REVERSE LEAKAGE | 最大峰值脉冲电流 PEAK PULSE CURRENT | 最大钳位电压 MAXIMUM CLAMPING VOLTAGE | 击穿电压 最大温度系数 MAXIMUM TEMPERATURE COEFFICIENT OF V _(BR) |
|------------|-----------------|------|------------------------------|-----------|----------------------|---|---|-----------------------------------|--|--|
| | 单向 | 双向 | V _(BR) (注释 1) | | I _T | V _{RM} | I _D @ V _{RM} (注释 2) | I _{ppm} | V _C @ I _{ppm} | |
| | | | V(最小 MIN) | V(最大 MAX) | mA | V | μA | A | V | % / °C |
| P6SMB6.8 | | | 6.12 | 7.48 | 10.0 | 5.50 | 1000.0 | 58.0 | 10.8 | 0.057 |
| P6SMB6.8A | 6V8A | 6V8C | 6.45 | 7.14 | 10.0 | 5.80 | 1000.0 | 60.0 | 10.5 | 0.057 |
| P6SMB7.5 | | | 6.75 | 8.25 | 10.0 | 6.05 | 500.0 | 53.0 | 11.7 | 0.061 |
| P6SMB7.5A | 7V5A | 7V5C | 7.13 | 7.88 | 10.0 | 6.40 | 500.0 | 55.0 | 11.3 | 0.061 |
| P6SMB8.2 | | | 7.38 | 9.02 | 10.0 | 6.63 | 200.0 | 50.0 | 12.5 | 0.065 |
| P6SMB8.2A | 8V2A | 8V2C | 7.79 | 8.61 | 10.0 | 7.02 | 200.0 | 52.0 | 12.1 | 0.065 |
| P6SMB9.1 | | | 8.19 | 10.0 | 1.0 | 7.37 | 50.0 | 45.0 | 13.8 | 0.068 |
| P6SMB9.1A | 9V1A | 9V1C | 8.65 | 9.55 | 1.0 | 7.78 | 50.0 | 47.0 | 13.4 | 0.068 |
| P6SMB10 | | | 9.00 | 11.0 | 1.0 | 8.10 | 10.0 | 42.0 | 15.0 | 0.073 |
| P6SMB10A | 10A | 10C | 9.50 | 10.5 | 1.0 | 8.55 | 10.0 | 43.0 | 14.5 | 0.073 |
| P6SMB11 | | | 9.90 | 12.1 | 1.0 | 8.92 | 5.0 | 38.0 | 16.2 | 0.075 |
| P6SMB11A | 11A | 11C | 10.5 | 11.6 | 1.0 | 9.40 | 5.0 | 40.0 | 15.6 | 0.075 |
| P6SMB12 | | | 10.8 | 13.2 | 1.0 | 9.72 | 5.0 | 36.0 | 17.3 | 0.078 |
| P6SMB12A | 12A | 12C | 11.4 | 12.6 | 1.0 | 10.2 | 5.0 | 37.0 | 16.7 | 0.078 |
| P6SMB13 | | | 11.7 | 14.3 | 1.0 | 10.5 | 5.0 | 33.0 | 19.0 | 0.081 |
| P6SMB13A | 13A | 13C | 12.4 | 13.7 | 1.0 | 11.1 | 5.0 | 34.0 | 18.2 | 0.081 |
| P6SMB15 | | | 13.5 | 16.5 | 1.0 | 12.1 | 5.0 | 28.0 | 22.0 | 0.084 |
| P6SMB15A | 15A | 15C | 14.3 | 15.8 | 1.0 | 12.8 | 5.0 | 29.0 | 21.2 | 0.084 |
| P6SMB16 | | | 14.4 | 17.6 | 1.0 | 12.9 | 5.0 | 26.0 | 23.5 | 0.086 |
| P6SMB16A | 16A | 16C | 15.2 | 16.8 | 1.0 | 13.6 | 5.0 | 28.0 | 22.5 | 0.086 |
| P6SMB18 | | | 16.2 | 19.8 | 1.0 | 14.5 | 5.0 | 23.0 | 26.5 | 0.088 |
| P6SMB18A | 18A | 18C | 17.1 | 18.9 | 1.0 | 15.3 | 5.0 | 25.0 | 25.2 | 0.088 |
| P6SMB20 | | | 18.0 | 22.0 | 1.0 | 16.2 | 5.0 | 21.0 | 29.1 | 0.090 |
| P6SMB20A | 20A | 20C | 19.0 | 21.0 | 1.0 | 17.1 | 5.0 | 22.0 | 27.7 | 0.090 |
| P6SMB22 | | | 19.8 | 24.2 | 1.0 | 17.8 | 5.0 | 19.0 | 31.9 | 0.092 |
| P6SMB22A | 22A | 22C | 20.9 | 23.1 | 1.0 | 18.8 | 5.0 | 20.0 | 30.6 | 0.092 |
| P6SMB24 | | | 21.6 | 26.4 | 1.0 | 19.4 | 5.0 | 18.0 | 34.7 | 0.094 |
| P6SMB24A | 24A | 24C | 22.8 | 25.2 | 1.0 | 20.5 | 5.0 | 19.0 | 33.2 | 0.094 |
| P6SMB27 | | | 24.3 | 29.7 | 1.0 | 21.8 | 5.0 | 16.0 | 39.1 | 0.096 |
| P6SMB27A | 27A | 27C | 25.7 | 28.4 | 1.0 | 23.1 | 5.0 | 16.8 | 37.5 | 0.096 |
| P6SMB30 | | | 27.0 | 33.0 | 1.0 | 24.3 | 5.0 | 14.0 | 43.5 | 0.097 |
| P6SMB30A | 30A | 30C | 28.5 | 31.5 | 1.0 | 25.6 | 5.0 | 15.0 | 41.4 | 0.097 |
| P6SMB33 | | | 29.7 | 36.3 | 1.0 | 26.8 | 5.0 | 13.0 | 47.7 | 0.098 |
| P6SMB33A | 33A | 33C | 31.4 | 34.7 | 1.0 | 28.2 | 5.0 | 13.8 | 45.7 | 0.098 |
| P6SMB36 | | | 32.4 | 39.6 | 1.0 | 29.1 | 5.0 | 12.0 | 52.0 | 0.099 |
| P6SMB36A | 36A | 36C | 34.2 | 37.8 | 1.0 | 30.8 | 5.0 | 12.6 | 49.9 | 0.099 |
| P6SMB39 | | | 35.1 | 42.9 | 1.0 | 31.6 | 5.0 | 11.1 | 56.4 | 0.100 |
| P6SMB39A | 39A | 39C | 37.1 | 41.0 | 1.0 | 33.3 | 5.0 | 11.6 | 53.9 | 0.100 |
| P6SMB43 | | | 38.7 | 47.3 | 1.0 | 34.8 | 5.0 | 10.0 | 61.9 | 0.101 |
| P6SMB43A | 43A | 43C | 40.9 | 45.2 | 1.0 | 36.8 | 5.0 | 10.6 | 59.3 | 0.101 |
| P6SMB47 | | | 42.3 | 51.7 | 1.0 | 38.1 | 5.0 | 9.2 | 67.8 | 0.101 |

| 电特性 (测量环境温度为25°C, 除非另有规定) ELECTRICAL CHARACTERISTICS (at TA=25 °C unless otherwise noted) | | | | | | | | | | |
|---|-----------------|------|------------------------------|-----------|----------------------|---|---|-----------------------------------|--|---|
| 型号 TYPE | 标识代码 Marking | | 击穿电压 BREAKDOWN VOLTAGE | | 测试电流 TEST CURRENT | 变位电压 REVERSE STAND-OFF VOLTAGE | 最大反向漏电流 REVERSE LEAKAGE | 最大峰值脉冲电流 PEAK PULSE CURRENT | 最大钳位电压 MAXIMUM CLAMPING VOLTAGE | 击穿电压 最大温度系数 COEFFICIENT OF V _(BR) |
| | 单向 | 双向 | V _(BR) (注释 1) | | I _T | V _{RM} | I ₀ @ V _{RM} (注释 2) | I _{ppm} | V _C @ I _{ppm} | |
| | | | V(最小 MIN) | V(最大 MAX) | mA | V | μA | A | V | % / °C |
| P6SMB47A | 47A | 47C | 44.7 | 49.4 | 1.0 | 40.2 | 5.0 | 9.7 | 64.8 | 0.101 |
| P6SMB51 | | | 45.9 | 56.1 | 1.0 | 41.3 | 5.0 | 8.5 | 73.5 | 0.102 |
| P6SMB51A | 51A | 51C | 48.5 | 53.6 | 1.0 | 43.6 | 5.0 | 8.9 | 70.1 | 0.102 |
| P6SMB56 | | | 50.4 | 61.6 | 1.0 | 45.4 | 5.0 | 7.8 | 80.5 | 0.103 |
| P6SMB56A | 56A | 56C | 53.2 | 58.8 | 1.0 | 47.8 | 5.0 | 8.1 | 77.0 | 0.103 |
| P6SMB58A | 58A | 58C | 55.1 | 60.9 | 1.0 | 49.3 | 5.0 | 7.8 | 80.7 | 0.103 |
| P6SMB62 | | | 55.8 | 68.2 | 1.0 | 50.2 | 5.0 | 7.0 | 89.0 | 0.104 |
| P6SMB62A | 62A | 62C | 58.9 | 65.1 | 1.0 | 53.0 | 5.0 | 7.4 | 85.0 | 0.104 |
| P6SMB68 | | | 61.2 | 74.8 | 1.0 | 55.1 | 5.0 | 6.4 | 98.0 | 0.104 |
| P6SMB68A | 68A | 68C | 64.6 | 71.4 | 1.0 | 58.1 | 5.0 | 6.8 | 92.0 | 0.104 |
| P6SMB75 | | | 67.5 | 82.5 | 1.0 | 60.7 | 5.0 | 5.8 | 108 | 0.105 |
| P6SMB75A | 75A | 75C | 71.3 | 78.8 | 1.0 | 64.1 | 5.0 | 6.1 | 103 | 0.105 |
| P6SMB82 | | | 73.8 | 90.2 | 1.0 | 66.4 | 5.0 | 5.3 | 118 | 0.105 |
| P6SMB82A | 82A | 82C | 77.9 | 86.1 | 1.0 | 70.1 | 5.0 | 5.5 | 113 | 0.105 |
| P6SMB91 | | | 81.9 | 100 | 1.0 | 73.7 | 5.0 | 4.8 | 131 | 0.106 |
| P6SMB91A | 91A | 91C | 86.5 | 95.5 | 1.0 | 77.8 | 5.0 | 5.0 | 125 | 0.106 |
| P6SMB100 | | | 90.0 | 110 | 1.0 | 81.0 | 5.0 | 4.3 | 144 | 0.106 |
| P6SMB100A | 100A | 100C | 95.0 | 105 | 1.0 | 85.5 | 5.0 | 4.5 | 137 | 0.106 |
| P6SMB110 | | | 99.0 | 121 | 1.0 | 89.2 | 5.0 | 3.9 | 158 | 0.107 |
| P6SMB110A | 110A | 110C | 105 | 116 | 1.0 | 94.0 | 5.0 | 4.1 | 152 | 0.107 |
| P6SMB120 | | | 108 | 132 | 1.0 | 97.2 | 5.0 | 3.6 | 173 | 0.107 |
| P6SMB120A | 120A | 120C | 114 | 126 | 1.0 | 102 | 5.0 | 3.8 | 165 | 0.107 |
| P6SMB130 | | | 117 | 143 | 1.0 | 105 | 5.0 | 3.3 | 187 | 0.107 |
| P6SMB130A | 130A | 130C | 124 | 137 | 1.0 | 111 | 5.0 | 3.5 | 179 | 0.107 |
| P6SMB150 | | | 135 | 165 | 1.0 | 121 | 5.0 | 2.9 | 215 | 0.108 |
| P6SMB150A | 150A | 150C | 143 | 158 | 1.0 | 128 | 5.0 | 3.0 | 207 | 0.108 |
| P6SMB160 | | | 144 | 176 | 1.0 | 130 | 5.0 | 2.7 | 230 | 0.108 |
| P6SMB160A | 160A | 160C | 152 | 168 | 1.0 | 136 | 5.0 | 2.8 | 219 | 0.108 |
| P6SMB170 | | | 153 | 187 | 1.0 | 138 | 5.0 | 2.5 | 244 | 0.108 |
| P6SMB170A | 170A | 170C | 162 | 179 | 1.0 | 145 | 5.0 | 2.6 | 234 | 0.108 |
| P6SMB180 | | | 162 | 198 | 1.0 | 146 | 5.0 | 2.4 | 258 | 0.108 |
| P6SMB180A | 180A | 180C | 171 | 189 | 1.0 | 154 | 5.0 | 2.5 | 246 | 0.108 |
| P6SMB200 | | | 180 | 220 | 1.0 | 162 | 5.0 | 2.1 | 287 | 0.108 |
| P6SMB200A | 200A | 200C | 190 | 210 | 1.0 | 171 | 5.0 | 2.2 | 274 | 0.108 |

注 释:

1. V (BR) 值在施加 IT 300μs 后测量, IT 为方波或等效的脉冲波形。
2. 对于双向型, VRWM 在 10V 及 10V 以下, ID 值加倍。
3. 在型号名称后注有 C 或 CA , 表示双向型, 电气特性 适用于两个方向。

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - PEAK PULSE POWER RATING CURVE

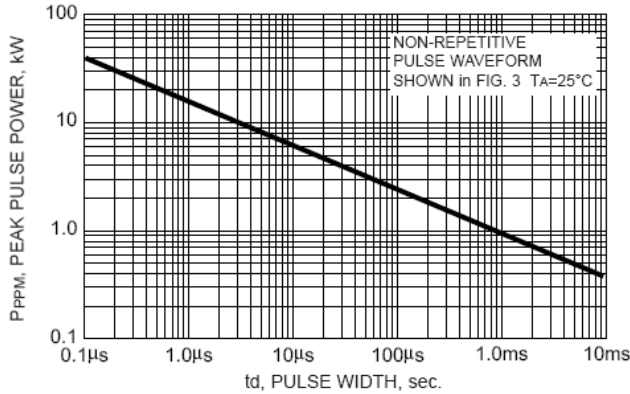


FIG. 2 - PULSE DERATING CURVE

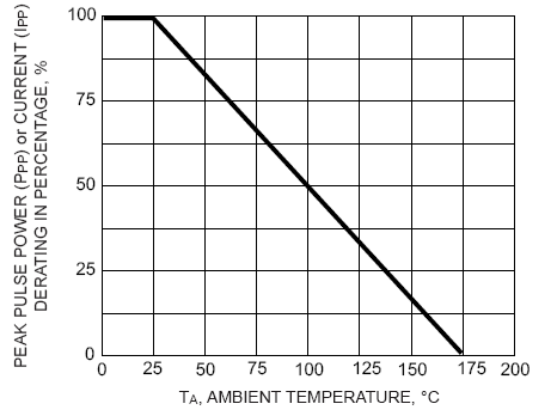


FIG. 3 - PULSE WAVEFORM

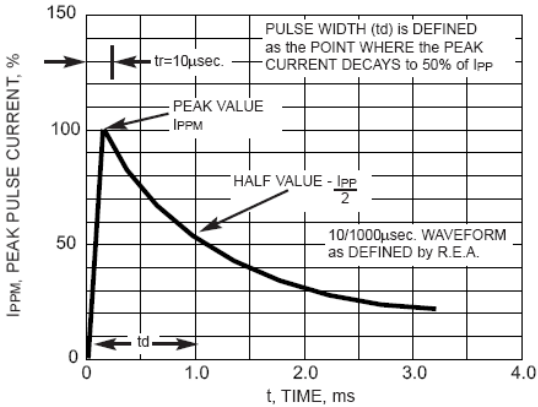


FIG. 4 - TYPICAL JUNCTION CAPACITANCE UNIDIRECTIONAL

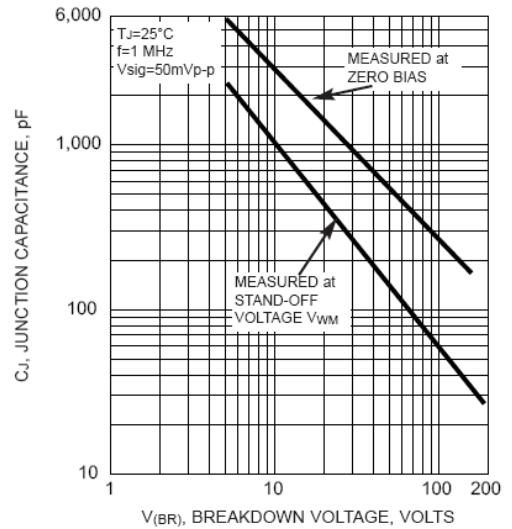


FIG. 5 - STEADY STATE POWER DERATING CURVE

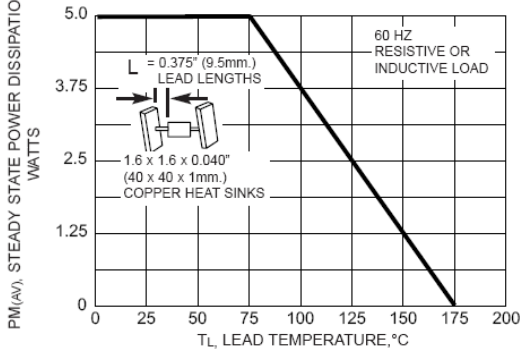


FIG. 6 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT UNI-DIRECTIONAL

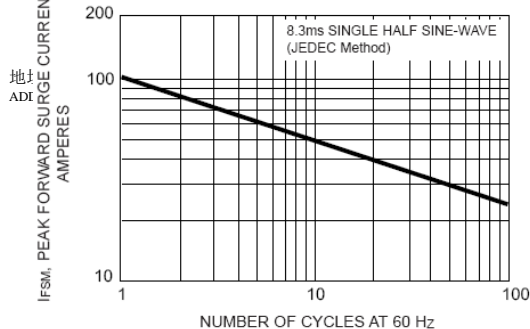


FIG. 7 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

