

Silicon Avalanche Diodes

400W Surface Mount Transient Voltage Suppressors

RoHS P4SMA Series

ELECTRICAL SPECIFICATION @ Tamb 25°C

| Part Number (Uni) | Part Number (Bi) | Device Marking Code | | Reverse Stand off Voltage Vr (Volts) | Breakdown Voltage VBR (Volts) @ IT | | Test Current IT (mA) | Maximum Clamping Voltage Vc @ IPP (Volts) | Maximum Peak Pulse Current IPP (A) | Maximum Reverse Leakage IR @ VR (µA) |
|-------------------|------------------|---------------------|------|--------------------------------------|------------------------------------|--------|----------------------|---|------------------------------------|--------------------------------------|
| | | UNI | BI | | MIN | MAX | | | | |
| P4SMA6.8A | P4SMA6.8CA | 6V8A | 6V8C | 5.80 | 6.45 | 7.14 | 10 | 10.5 | 39.0 | 1000 |
| P4SMA7.5A | P4SMA7.5CA | 7V5A | 7V5C | 6.40 | 7.13 | 7.88 | 10 | 11.3 | 36.3 | 500 |
| P4SMA8.2A | P4SMA8.2CA | 8V2A | 8V2C | 7.02 | 7.79 | 8.61 | 10 | 12.1 | 33.9 | 200 |
| P4SMA9.1A | P4SMA9.1CA | 9V1A | 9V1C | 7.78 | 8.65 | 9.55 | 1 | 13.4 | 30.6 | 50 |
| P4SMA10A | P4SMA10CA | 10A | 10C | 8.55 | 9.50 | 10.50 | 1 | 14.5 | 28.3 | 10 |
| P4SMA11A | P4SMA11CA | 11A | 11C | 9.40 | 10.50 | 11.60 | 1 | 15.6 | 26.3 | 5 |
| P4SMA12A | P4SMA12CA | 12A | 12C | 10.20 | 11.40 | 12.60 | 1 | 16.7 | 24.6 | 5 |
| P4SMA13A | P4SMA13CA | 13A | 13C | 11.10 | 12.40 | 13.70 | 1 | 18.2 | 22.5 | 5 |
| P4SMA15A | P4SMA15CA | 15A | 15C | 12.80 | 14.30 | 15.80 | 1 | 21.2 | 19.3 | 5 |
| P4SMA16A | P4SMA16CA | 16A | 16C | 13.60 | 15.20 | 16.80 | 1 | 22.5 | 18.2 | 5 |
| P4SMA18A | P4SMA18CA | 18A | 18C | 15.30 | 17.10 | 18.90 | 1 | 25.5 | 16.1 | 5 |
| P4SMA20A | P4SMA20CA | 20A | 20C | 17.10 | 19.00 | 21.00 | 1 | 27.7 | 14.8 | 5 |
| P4SMA22A | P4SMA22CA | 22A | 22C | 18.80 | 20.90 | 23.10 | 1 | 30.6 | 13.4 | 5 |
| P4SMA24A | P4SMA24CA | 24A | 24C | 20.50 | 22.80 | 25.20 | 1 | 33.2 | 12.3 | 5 |
| P4SMA27A | P4SMA27CA | 27A | 27C | 23.10 | 25.70 | 28.40 | 1 | 37.5 | 10.9 | 5 |
| P4SMA30A | P4SMA30CA | 30A | 30C | 25.60 | 28.50 | 31.50 | 1 | 41.4 | 9.9 | 5 |
| P4SMA33A | P4SMA33CA | 33A | 33C | 28.20 | 31.40 | 34.70 | 1 | 45.7 | 9.0 | 5 |
| P4SMA36A | P4SMA36CA | 36A | 36C | 30.80 | 34.20 | 37.80 | 1 | 49.9 | 8.2 | 5 |
| P4SMA39A | P4SMA39CA | 39A | 39C | 33.30 | 37.10 | 41.00 | 1 | 53.9 | 7.6 | 5 |
| P4SMA43A | P4SMA43CA | 43A | 43C | 36.80 | 40.90 | 45.20 | 1 | 59.3 | 6.9 | 5 |
| P4SMA47A | P4SMA47CA | 47A | 47C | 40.20 | 44.70 | 49.40 | 1 | 64.8 | 6.3 | 5 |
| P4SMA51A | P4SMA51CA | 51A | 51C | 43.60 | 48.50 | 53.60 | 1 | 70.1 | 5.8 | 5 |
| P4SMA56A | P4SMA56CA | 56A | 56C | 47.80 | 53.20 | 58.80 | 1 | 77.0 | 5.3 | 5 |
| P4SMA62A | P4SMA62CA | 62A | 62C | 53.00 | 58.90 | 65.10 | 1 | 85.0 | 4.8 | 5 |
| P4SMA68A | P4SMA68CA | 68A | 68C | 58.10 | 64.60 | 71.40 | 1 | 92.0 | 4.5 | 5 |
| P4SMA75A | P4SMA75CA | 75A | 75C | 64.10 | 71.30 | 78.80 | 1 | 103.0 | 4.0 | 5 |
| P4SMA82A | P4SMA82CA | 82A | 82C | 70.10 | 77.90 | 86.10 | 1 | 113.0 | 3.6 | 5 |
| P4SMA91A | P4SMA91CA | 91A | 91C | 77.80 | 86.50 | 95.50 | 1 | 125.0 | 3.3 | 5 |
| P4SMA100A | P4SMA100CA | 100A | 100C | 85.50 | 95.00 | 105.00 | 1 | 137.0 | 3.0 | 5 |
| P4SMA110A | P4SMA110CA | 110A | 110C | 94.00 | 105.00 | 116.00 | 1 | 152.0 | 2.7 | 5 |
| P4SMA120A | P4SMA120CA | 120A | 120C | 102.00 | 114.00 | 126.00 | 1 | 165.0 | 2.5 | 5 |
| P4SMA130A | P4SMA130CA | 130A | 130C | 111.00 | 124.00 | 137.00 | 1 | 179.0 | 2.3 | 5 |
| P4SMA150A | P4SMA150CA | 150A | 150C | 128.00 | 143.00 | 158.00 | 1 | 207.0 | 2.0 | 5 |
| P4SMA160A | P4SMA160CA | 160A | 160C | 136.00 | 152.00 | 168.00 | 1 | 219.0 | 1.9 | 5 |
| P4SMA170A | P4SMA170CA | 170A | 170C | 145.00 | 162.00 | 179.00 | 1 | 234.0 | 1.8 | 5 |
| P4SMA180A | P4SMA180CA | 180A | 180C | 154.00 | 171.00 | 189.00 | 1 | 246.0 | 1.7 | 5 |
| P4SMA200A | P4SMA200CA | 200A | 200C | 171.00 | 190.00 | 210.00 | 1 | 274.0 | 1.5 | 5 |
| P4SMA220A | P4SMA220CA | 220A | 220C | 185.00 | 209.00 | 231.00 | 1 | 328.0 | 1.3 | 5 |
| P4SMA250A | P4SMA250CA | 250A | 250C | 214.00 | 237.00 | 263.00 | 1 | 344.0 | 1.2 | 5 |
| P4SMA300A | P4SMA300CA | 300A | 300C | 256.00 | 285.00 | 315.00 | 1 | 414.0 | 1.0 | 5 |
| P4SMA350A | P4SMA350CA | 350A | 350C | 300.00 | 332.00 | 368.00 | 1 | 482.0 | 0.9 | 5 |
| P4SMA400A | P4SMA400CA | 400A | 400C | 342.00 | 380.00 | 420.00 | 1 | 548.0 | 0.8 | 5 |
| P4SMA440A | P4SMA440CA | 440A | 440C | 376.00 | 418.00 | 462.00 | 1 | 602.0 | 0.7 | 5 |
| P4SMA480A | P4SMA480CA | 480A | 480C | 408.00 | 456.00 | 504.00 | 1 | 658.0 | 0.6 | 5 |
| P4SMA510A | P4SMA510CA | 510A | 510C | 434.00 | 485.00 | 535.00 | 1 | 698.0 | 0.6 | 5 |
| P4SMA530A | P4SMA530CA | 530A | 530C | 477.00 | 503.50 | 556.50 | 1 | 725.0 | 0.6 | 5 |
| P4SMA540A | P4SMA540CA | 540A | 540C | 459.00 | 513.00 | 567.00 | 1 | 740.0 | 0.5 | 5 |
| P4SMA550A | P4SMA550CA | 550A | 550C | 495.00 | 522.50 | 577.50 | 1 | 760.0 | 0.5 | 5 |

For bidirectional type having Vrwm of 10 volts and less, the IR limit is double.
The available parts are "A" type only, the parts without A (VBR is ± 10%) is not available.

Silicon Avalanche Diodes

400W Surface Mount Transient Voltage Suppressors

RoHS P4SMA Series

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

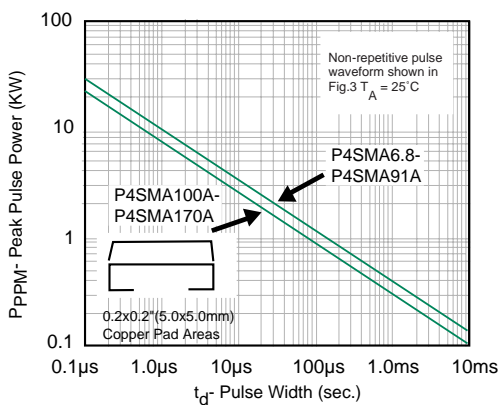


Fig. 1 Peak Pulse Power Rating

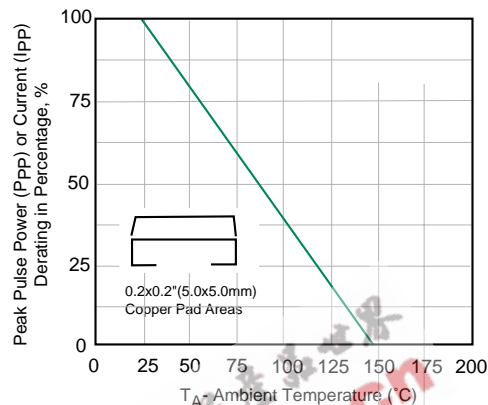


Fig. 2 Pulse Derating Curve

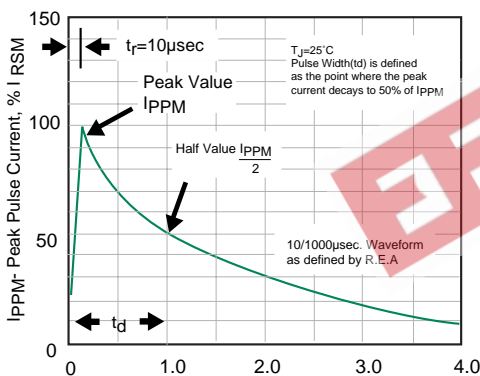


Fig. 3 Pulse Waveform

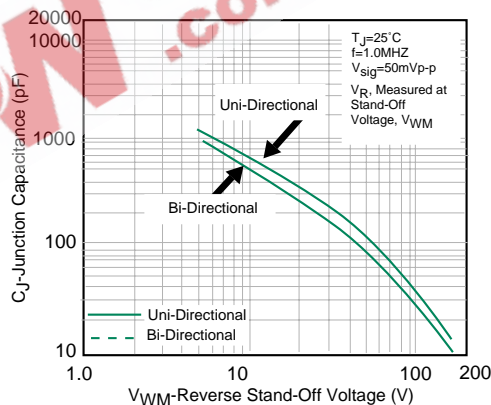


Fig. 4- Typical Junction Capacitance

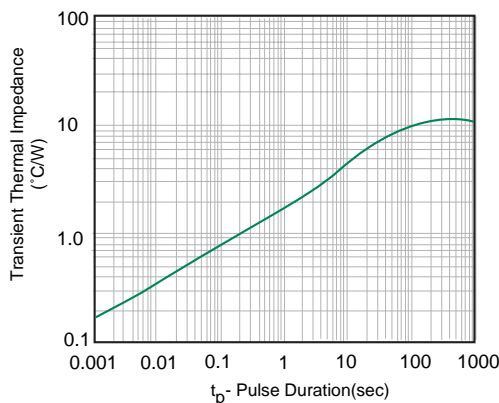


Fig. 5- Typ. Transient Thermal Impedance

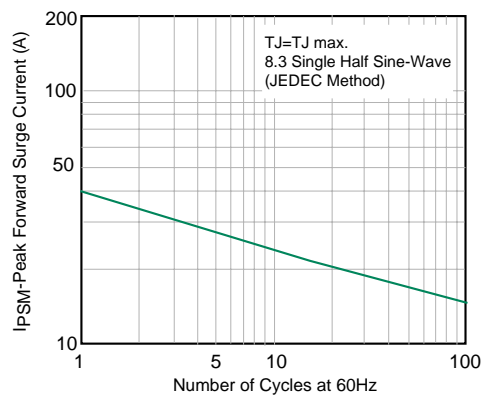


Fig. 6- Maximum Non-Repetitive Peak Forward Surge Current Uni-Directional Only

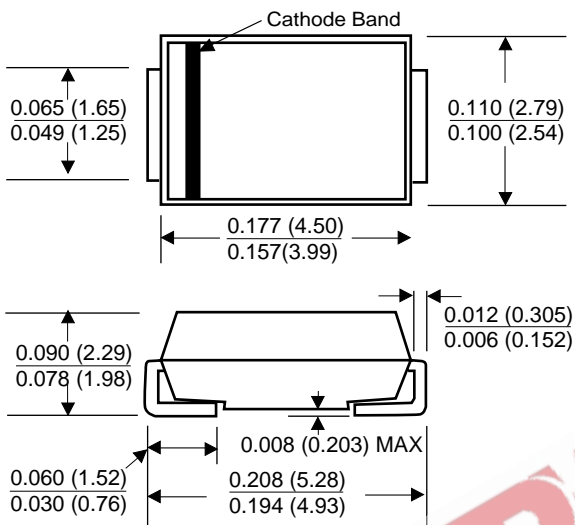
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RoHS P4SMA Series

Package Outline Dimensions and Pad Layouts

DO-214AC (SMA)



Dimensions in inches and (millimeters)

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