

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

Features

- ◆ 400W Peak Pulse Power Dissipation
- ◆ 6.8V - 550V Standoff Voltages
- ◆ Uni- and Bi-Directional Versions Available Excellent Clamping Capability
- ◆ Glass Passivated Die Construction
- ◆ Low inductance
- ◆ Fast Response Time
- ◆ Plastic Material: UL Flammability Classification Rating 94V-0

Mechanical Data

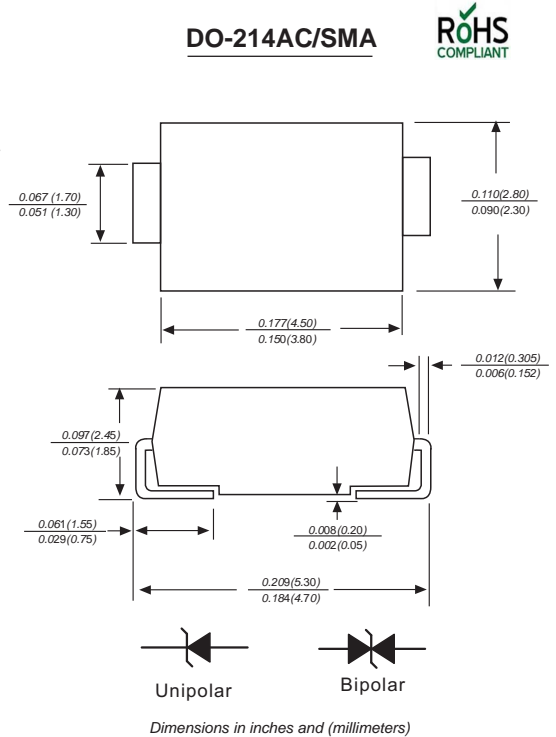
Case : SMA Molded plastic body

Terminals : Solderable per MIL-STD-750, Method 2026

Polarity Indicator: Cathode Band (Note: Bi-directional devices have no polarity indicator)

Making: Data Code and Marking Code

Weight : 0.00095ounce, 0.027grams



Maximum Ratings And Electrical Characteristics

| Ratings at 25°C ambient temperature unless otherwise specified. | | | |
|---|-----------------------------------|-------------------|------|
| Parameter | Symbol | Value | Unit |
| Peak Pulse Power Dissipation on TA=25°C (Note 1,2,4, Fig1) | P _{PPM} | 400 | W |
| Peak Forward Surge Current (Note 3, Fig4) | I _{FSM} | 60 | A |
| Peak Pulse Current on 10/1000 us waveform (Note 1) | I _{PPM} | see Table 1 | A |
| ESD Voltage per IEC6100-4-2 | Contact | V _{ESD1} | ± 30 |
| | Air | V _{ESD2} | ± 30 |
| Typical Thermal Resistance Junction to Ambient (Note 2) | R _{θJA} | 100 | °C/W |
| Operating Junction Temperature and Storage Temperature Range) | T _j , T _{stg} | -55 ~ +150 | °C |

NOTES:

1. Non-repetitive current pulse, per Fig.3 and derated above TA = 25°C per Fig. 2.
2. Mounted on 5mm² copper pads to each terminal.
3. Peak Forward Surge Current : 8.3ms single half sine-wave Superimposed on rated load (JEDEC method).
4. Peak pulse power waveform is 10/1000μS.

Characteristics at Ta = 25°C

Table 1

| Type | | Reverse Stand-off Voltage | Breakdown Voltage | | Test Current | Reverse Leakage | Max. Clamp Voltage | Peak Pulse Current | Package | |
|-----------|------------|---------------------------|----------------------------------|-------|------------------|-----------------|--------------------|--------------------|-----------------------------------|----------------------------------|
| | | | V _{BR} @ I _T | | | | | | SMA | |
| | | | UNI | BI | V _{RMW} | Min | Max | I _T | I _R @ V _{RMW} | V _C @ I _{PP} |
| | | V | V | V | mA | µA | V | A | UNI | BI |
| P4SMA6.8A | P4SMA6.8CA | 5.8 | 6.45 | 7.14 | 10 | 1000 | 10.5 | 39.0 | 6V8A | 6V8C |
| P4SMA7.5A | P4SMA7.5CA | 6.4 | 7.13 | 7.88 | 10 | 500 | 11.3 | 36.3 | 7V5A | 7V5C |
| P4SMA8.2A | P4SMA8.2CA | 7.02 | 7.79 | 8.61 | 10 | 200 | 12.1 | 33.9 | 8V2A | 8V2C |
| P4SMA9.1A | P4SMA9.1CA | 7.78 | 8.65 | 9.55 | 1 | 50 | 13.4 | 30.6 | 9V1A | 9V1C |
| P4SMA10A | P4SMA10CA | 8.55 | 9.5 | 10.5 | 1 | 10 | 14.5 | 28.3 | 10A | 10C |
| P4SMA11A | P4SMA11CA | 9.4 | 10.5 | 11.6 | 1 | 5 | 15.6 | 26.3 | 11A | 11C |
| P4SMA12A | P4SMA12CA | 10.2 | 11.4 | 12.6 | 1 | 5 | 16.7 | 24.6 | 12A | 12C |
| P4SMA13A | P4SMA13CA | 11.1 | 12.4 | 13.7 | 1 | 1 | 18.2 | 22.5 | 13A | 13C |
| P4SMA15A | P4SMA15CA | 12.8 | 14.3 | 15.8 | 1 | 1 | 21.2 | 19.3 | 15A | 15C |
| P4SMA16A | P4SMA16CA | 13.6 | 15.2 | 16.8 | 1 | 1 | 22.5 | 18.2 | 16A | 16C |
| P4SMA18A | P4SMA18CA | 15.3 | 17.1 | 18.9 | 1 | 1 | 25.5 | 16.1 | 18A | 18C |
| P4SMA20A | P4SMA20CA | 17.1 | 19 | 21 | 1 | 1 | 27.7 | 14.8 | 20A | 20C |
| P4SMA22A | P4SMA22CA | 18.8 | 20.9 | 23.1 | 1 | 1 | 30.6 | 13.4 | 22A | 22C |
| P4SMA24A | P4SMA24CA | 20.5 | 22.8 | 25.2 | 1 | 1 | 33.2 | 12.3 | 24A | 24C |
| P4SMA27A | P4SMA27CA | 23.1 | 25.7 | 28.4 | 1 | 1 | 37.5 | 10.9 | 27A | 27C |
| P4SMA30A | P4SMA30CA | 25.6 | 28.5 | 31.5 | 1 | 1 | 41.4 | 9.9 | 30A | 30C |
| P4SMA33A | P4SMA33CA | 28.2 | 31.4 | 34.7 | 1 | 1 | 45.7 | 9.0 | 33A | 33C |
| P4SMA36A | P4SMA36CA | 30.8 | 34.2 | 37.8 | 1 | 1 | 49.9 | 8.2 | 36A | 36C |
| P4SMA39A | P4SMA39CA | 33.3 | 37.1 | 41 | 1 | 1 | 53.9 | 7.6 | 39A | 39C |
| P4SMA43A | P4SMA43CA | 36.8 | 40.9 | 45.2 | 1 | 1 | 59.3 | 6.9 | 43A | 43C |
| P4SMA47A | P4SMA47CA | 40.2 | 44.7 | 49.4 | 1 | 1 | 64.8 | 6.3 | 47A | 47C |
| P4SMA51A | P4SMA51CA | 43.6 | 48.5 | 53.6 | 1 | 1 | 70.1 | 5.8 | 51A | 51C |
| P4SMA56A | P4SMA56CA | 47.8 | 53.2 | 58.8 | 1 | 1 | 77.0 | 5.3 | 56A | 56C |
| P4SMA62A | P4SMA62CA | 53 | 58.9 | 65.1 | 1 | 1 | 85.0 | 4.8 | 62A | 62C |
| P4SMA68A | P4SMA68CA | 58.1 | 64.6 | 71.4 | 1 | 1 | 92.0 | 4.5 | 68A | 68C |
| P4SMA75A | P4SMA75CA | 64.1 | 71.3 | 78.8 | 1 | 1 | 103.0 | 4.0 | 75A | 75C |
| P4SMA82A | P4SMA82CA | 70.1 | 77.9 | 86.1 | 1 | 1 | 113.0 | 3.6 | 82A | 82C |
| P4SMA91A | P4SMA91CA | 77.8 | 86.5 | 95.5 | 1 | 1 | 125.0 | 3.3 | 91A | 91C |
| P4SMA100A | P4SMA100CA | 85.5 | 95 | 105 | 1 | 1 | 137.0 | 3.0 | 100A | 100C |
| P4SMA110A | P4SMA110CA | 94 | 105 | 116 | 1 | 1 | 152.0 | 2.7 | 110A | 110C |
| P4SMA120A | P4SMA120CA | 102 | 114 | 126 | 1 | 1 | 165.0 | 2.5 | 120A | 120C |
| P4SMA130A | P4SMA130CA | 111 | 124 | 137 | 1 | 1 | 179.0 | 2.3 | 130A | 130C |
| P4SMA150A | P4SMA150CA | 128 | 143 | 158 | 1 | 1 | 207.0 | 2.0 | 150A | 150C |
| P4SMA160A | P4SMA160CA | 136 | 152 | 168 | 1 | 1 | 219.0 | 1.9 | 160A | 160C |
| P4SMA170A | P4SMA170CA | 145 | 162 | 179 | 1 | 1 | 234.0 | 1.8 | 170A | 170C |
| P4SMA180A | P4SMA180CA | 154 | 171 | 189 | 1 | 1 | 246.0 | 1.7 | 180A | 180C |
| P4SMA200A | P4SMA200CA | 171 | 190 | 210 | 1 | 1 | 274.0 | 1.5 | 200A | 200C |
| P4SMA220A | P4SMA220CA | 185 | 209 | 231 | 1 | 1 | 328.0 | 1.3 | 220A | 220C |
| P4SMA250A | P4SMA250CA | 214 | 237 | 263 | 1 | 1 | 344.0 | 1.2 | 250A | 250C |
| P4SMA300A | P4SMA300CA | 256 | 285 | 315 | 1 | 1 | 414.0 | 1.0 | 300A | 300C |
| P4SMA350A | P4SMA350CA | 300 | 332 | 368 | 1 | 1 | 482.0 | 0.9 | 350A | 350C |
| P4SMA400A | P4SMA400CA | 342 | 380 | 420 | 1 | 1 | 548.0 | 0.8 | 400A | 400C |
| P4SMA440A | P4SMA440CA | 376 | 418 | 462 | 1 | 1 | 602.0 | 0.7 | 440A | 440C |
| P4SMA480A | P4SMA480CA | 408 | 456 | 504 | 1 | 1 | 658.0 | 0.6 | 480A | 480C |
| P4SMA510A | P4SMA510CA | 434 | 485 | 535 | 1 | 1 | 698.0 | 0.6 | 510A | 510C |
| P4SMA530A | P4SMA530CA | 451 | 503.5 | 556.5 | 1 | 1 | 725.0 | 0.6 | 530A | 530C |
| P4SMA540A | P4SMA540CA | 460 | 513 | 567 | 1 | 1 | 740.0 | 0.5 | 540A | 540C |
| P4SMA550A | P4SMA550CA | 468 | 522.5 | 577.5 | 1 | 1 | 760.0 | 0.5 | 550A | 550C |

Ratings and Characteristic Curves TA =25°C unless otherwise noted

Fig.1 Peak Pulse Power Rating Curve

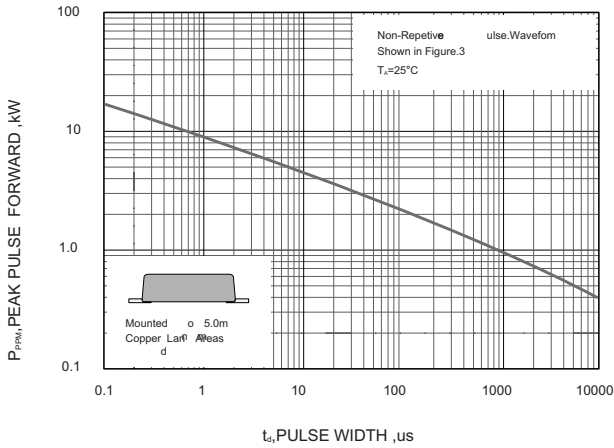


Fig.2 Forward Current Derating Curve

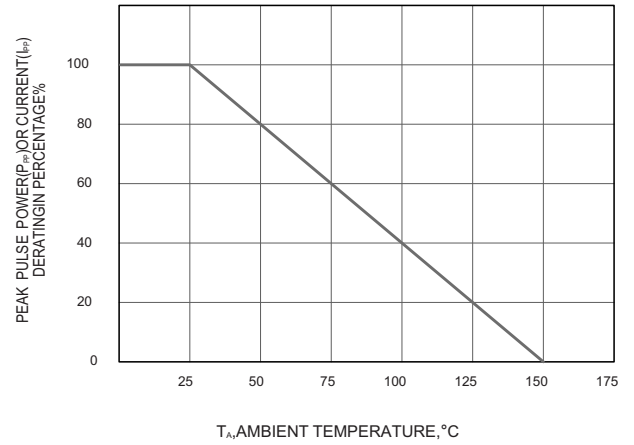


Fig.3 Pulse Waveform

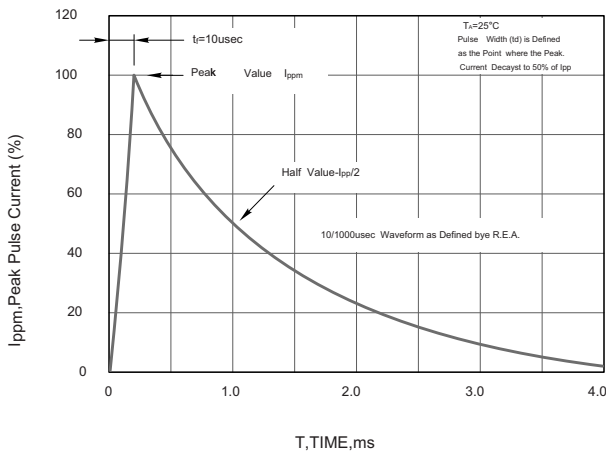


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

