

P6SMB SERIES

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

VOLTAGE - 6.8 TO 550 Volts

600 Watt Peak Pulse Power

| P6SMB PART NUMBER | | MARKING CODE | | REVERSE STAND- OFF VOLTAGE V _{RWM} (V) | BREAKDOWN VOLTAGE V _{BR} (V) MIN. @I _T | BREAKDOWN VOLTAGE V _{BR} (V) MAX. @I _T | TEST CURREN T I _T (mA) | MAXIMUM CLAMPING VOLTAGE @I _{pp} V _c (V) | PEAK PULSE CURRENT I _{pp} (A) | REVERSE LEAKAGE @ VRWM IR(μA) |
|----------------------|-------------|-----------------|--------------|---|---|---|---|---|---|--|
| | | UNI- POLAR | BI- POLAR | | | | | | | |
| P6SMB 6.8A | P6SMB 6.8CA | 6V8A | 6V8C | 5.80 | 6.45 | 7.14 | 10 | 10.5 | 58.1 | 1000 |
| P6SMB 7.5A | P6SMB 7.5CA | 7V5A | 7V5C | 6.40 | 7.13 | 7.88 | 10 | 11.3 | 54.0 | 500 |
| P6SMB 8.2A | P6SMB 8.2CA | 8V2A | 8V2C | 7.02 | 7.79 | 8.61 | 10 | 12.1 | 50.4 | 200 |
| P6SMB 9.1A | P6SMB 9.1CA | 9V1A | 9V1C | 7.78 | 8.65 | 9.55 | 1 | 13.4 | 45.5 | 50 |
| P6SMB 10A | P6SMB 10CA | 10A | 10C | 8.55 | 9.50 | 10.50 | 1 | 14.5 | 42.1 | 10 |
| P6SMB 11A | P6SMB 11CA | 11A | 11C | 9.40 | 10.50 | 11.60 | 1 | 15.6 | 39.1 | 5 |
| P6SMB 12A | P6SMB 12CA | 12A | 12C | 10.20 | 11.40 | 12.60 | 1 | 16.7 | 36.5 | 5 |
| P6SMB 13A | P6SMB 13CA | 13A | 13C | 11.10 | 12.40 | 13.70 | 1 | 18.2 | 33.5 | 5 |
| P6SMB 15A | P6SMB 15CA | 15A | 15C | 12.80 | 14.30 | 15.80 | 1 | 21.2 | 28.8 | 5 |
| P6SMB 16A | P6SMB 16CA | 16A | 16C | 13.60 | 15.20 | 16.80 | 1 | 22.5 | 27.1 | 5 |
| P6SMB 18A | P6SMB 18CA | 18A | 18C | 15.30 | 17.10 | 18.90 | 1 | 25.5 | 24.2 | 5 |
| P6SMB 20A | P6SMB 20CA | 20A | 20C | 17.10 | 19.00 | 21.00 | 1 | 27.7 | 22.0 | 5 |
| P6SMB 22A | P6SMB 22CA | 22A | 22C | 18.80 | 20.90 | 23.10 | 1 | 30.6 | 19.9 | 5 |
| P6SMB 24A | P6SMB 24CA | 24A | 24C | 20.50 | 22.80 | 25.20 | 1 | 33.2 | 18.4 | 5 |
| P6SMB 27A | P6SMB 27CA | 27A | 27C | 23.10 | 25.70 | 28.40 | 1 | 37.5 | 16.3 | 5 |
| P6SMB 30A | P6SMB 30CA | 30A | 30C | 25.60 | 28.50 | 31.50 | 1 | 41.4 | 14.7 | 5 |
| P6SMB 33A | P6SMB 33CA | 33A | 33C | 28.20 | 31.40 | 34.70 | 1 | 45.7 | 13.3 | 5 |
| P6SMB 36A | P6SMB 36CA | 36A | 36C | 30.80 | 34.20 | 37.80 | 1 | 49.9 | 12.2 | 5 |
| P6SMB 39A | P6SMB 39CA | 39A | 39C | 33.30 | 37.10 | 41.00 | 1 | 53.9 | 11.3 | 5 |
| P6SMB 43A | P6SMB 43CA | 43A | 43C | 36.80 | 40.90 | 45.20 | 1 | 59.3 | 10.3 | 5 |
| P6SMB 47A | P6SMB 47CA | 47A | 47C | 40.20 | 44.70 | 49.40 | 1 | 64.8 | 9.4 | 5 |
| P6SMB 51A | P6SMB 51CA | 51A | 51C | 43.60 | 48.50 | 53.60 | 1 | 70.1 | 8.7 | 5 |
| P6SMB 56A | P6SMB 56CA | 56A | 56C | 47.80 | 53.20 | 58.80 | 1 | 77.0 | 7.9 | 5 |
| P6SMB 62A | P6SMB 62CA | 62A | 62C | 53.00 | 58.90 | 65.10 | 1 | 85.0 | 7.2 | 5 |
| P6SMB 68A | P6SMB 68CA | 68A | 68C | 58.10 | 64.60 | 71.40 | 1 | 92.0 | 6.6 | 5 |
| P6SMB 75A | P6SMB 75CA | 75A | 75C | 64.10 | 71.30 | 78.80 | 1 | 103.0 | 5.9 | 5 |
| P6SMB 82A | P6SMB 82CA | 82A | 82C | 70.10 | 77.90 | 86.10 | 1 | 113.0 | 5.4 | 5 |
| P6SMB 91A | P6SMB 91CA | 91A | 91C | 77.80 | 86.50 | 95.50 | 1 | 125.0 | 4.9 | 5 |
| P6SMB 100A | P6SMB 100CA | 100A | 100C | 85.50 | 95.00 | 105.00 | 1 | 137.0 | 4.5 | 5 |
| P6SMB 110A | P6SMB 110CA | 110A | 110C | 94.00 | 105.00 | 116.00 | 1 | 152.0 | 4.0 | 5 |
| P6SMB 120A | P6SMB 120CA | 120A | 120C | 102.00 | 114.00 | 126.00 | 1 | 165.0 | 3.7 | 5 |
| P6SMB 130A | P6SMB 130CA | 130A | 130C | 111.00 | 124.00 | 137.00 | 1 | 179.0 | 3.4 | 5 |
| P6SMB 150A | P6SMB 150CA | 150A | 150C | 128.00 | 143.00 | 158.00 | 1 | 207.0 | 2.9 | 5 |
| P6SMB 160A | P6SMB 160CA | 160A | 160C | 136.00 | 152.00 | 168.00 | 1 | 219.0 | 2.8 | 5 |
| P6SMB 170A | P6SMB 170CA | 170A | 170C | 145.00 | 162.00 | 179.00 | 1 | 234.0 | 2.6 | 5 |
| P6SMB 180A | P6SMB 180CA | 180A | 180C | 154.00 | 171.00 | 189.00 | 1 | 246.0 | 2.5 | 5 |
| P6SMB 200A | P6SMB 200CA | 200A | 200C | 171.00 | 190.00 | 210.00 | 1 | 274.0 | 2.2 | 5 |
| P6SMB 220A | P6SMB 220CA | 220A | 220C | 185.00 | 209.00 | 231.00 | 1 | 328.0 | 1.9 | 5 |
| P6SMB 250A | P6SMB 250CA | 250A | 250C | 214.00 | 237.00 | 263.00 | 1 | 344.0 | 1.8 | 5 |
| P6SMB 300A | P6SMB 300CA | 300A | 300C | 256.00 | 285.00 | 315.00 | 1 | 414.0 | 1.5 | 5 |
| P6SMB 350A | P6SMB 400CA | 350A | 350C | 300.00 | 332.00 | 368.00 | 1 | 482.0 | 1.3 | 5 |
| P6SMB 400A | P6SMB 440CA | 400A | 400C | 342.00 | 380.00 | 420.00 | 1 | 548.0 | 1.1 | 5 |
| P6SMB 440A | P6SMB 480CA | 440A | 440C | 376.00 | 418.00 | 462.00 | 1 | 602.0 | 1.0 | 5 |
| P6SMB 480A | P6SMB 510CA | 480A | 480C | 408.00 | 456.00 | 504.00 | 1 | 658.0 | 0.9 | 5 |
| P6SMB 510A | P6SMB 520CA | 510A | 510C | 434.00 | 485.00 | 535.00 | 1 | 698.0 | 0.9 | 5 |
| P6SMB 530A | P6SMB 530CA | 530A | 530C | 450.00 | 503.50 | 556.50 | 1 | 725.0 | 0.8 | 5 |
| P6SMB 540A | P6SMB 540CA | 540A | 540C | 459.00 | 513.00 | 567.00 | 1 | 740.0 | 0.8 | 5 |
| P6SMB 550A | P6SMB 550CA | 550A | 550C | 467.00 | 522.50 | 577.50 | 1 | 760.0 | 0.8 | 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.

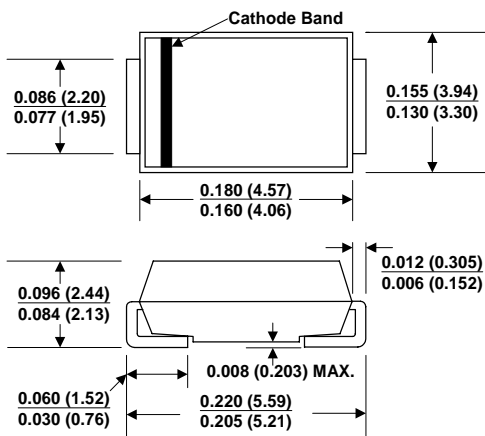
P6SMB SERIES

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

VOLTAGE - 6.8 TO 550 Volts

600 Watt Peak Pulse Power

DO-214AA (SMB J-Bend)



Dimensions in inches and(millimeters)

FEATURES

- For surface mounted applications in order to optimize board space
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Excellent clamping capability
- Repetition Rate(duty cycle):0.01%
- Fast response time: typically less than 1.0ps from 0 Volts to BV for unidirectional types
- Typical IR less than 1 μ A above 10V
- High temperature soldering: 250°C/10 seconds at terminals

MECHANICAL DATA

Case : JEDEC DO214AA. Molded plastic over glass passivated junction

Terminal : Solder plated, solderable per MIL-STD-750 ,Method 2026

Polarity : Color band denotes positive end (cathode) except Bidirectional

Standard Packaging : 12mm tape(EIA STD RS-481)

Weight : 0.003ounce, 0.093gram

DEVICES FOR BIPOLAR APPLICATION

For Bidirectional use Suffix CA for types P6SMB6.8CA thru types P6SMB550CA

Electrical characteristics apply in both directions

MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25 ambient temperature unless otherwise specified.

| RATING | SYMBOL | VALUE | UNITS |
|---|----------------|-------------|-------|
| Peak Pulse Power Dissipation on 10/1000 μ s waveform (Note 1,FIG.1) | P_{PPM} | Minimum 600 | Watts |
| Peak Pulse Current of on 10/1000 μ s waveform (Note 1,FIG.3) | I_{PPM} | SEE TABLE 1 | Amps |
| Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed on Rated Load,(JEDEC Method) (Note 3) | I_{FSM} | 100 | Amps |
| Operating junction and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | |

Notes :

1.Non-repetitive current pulse , per Fig. 3 and derated above $T_A = 25$ per Fig. 2 .

2.Mounted on 5.0mm²(0.03mm thick) Copper Pads to each terminal

3.8.3ms single half sine-wave , or equivalent square wave, Duty cycle = 4 pulses per minutes maximum.

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

