

**TVS Diodes - Surface Mount - 600 Watt Specifications - P6SMBJ Series Electrical Characteristics**

| Part Number* | Uni Part Marking | Bi Part Marking | Rated Standoff Voltage V <sub>wm</sub> (Volts) | Breakdown Voltage           |                      | Maximum Stand By Current @V <sub>wm</sub> + I <sub>d</sub> (μA) | 10/1000μs Maximum Clamping Voltage @I <sub>ppm</sub> # V <sub>c</sub> Max (Volts) | 10/1000μs Rated Peak Impulse Current I <sub>ppm</sub> # (Amperes) |
|--------------|------------------|-----------------|--|-----------------------------|----------------------|---|---|---|
|              |                  |                 |  | V <sub>br</sub> Min (Volts) | @I <sub>t</sub> (mA) |   |   |   |
| P6SMBJ5.0    | KD               | AD              | 5.0  | 6.40                        | 10                   | 800.0   | 9.6   | 62.5  |
| P6SMBJ5.0A   | KE               | AE              | 5.0  | 6.40                        | 10                   | 800.0   | 9.2   | 65.2  |
| P6SMBJ6.0    | KF               | AF              | 6.0  | 6.67                        | 10                   | 800.0   | 11.4  | 52.6  |
| P6SMBJ6.0A   | KG               | AG              | 6.0  | 6.67                        | 10                   | 800.0   | 10.3  | 58.3  |
| P6SMBJ6.5    | KH               | AH              | 6.5  | 7.22                        | 10                   | 500.0   | 12.3  | 48.7  |
| P6SMBJ6.5A   | KK               | AK              | 6.5  | 7.22                        | 10                   | 500.0   | 11.2  | 53.6  |
| P6SMBJ7.0    | KL               | AL              | 7.0  | 7.78                        | 10                   | 200.0   | 13.3  | 45.1  |
| P6SMBJ7.0A   | KM               | AM              | 7.0  | 7.78                        | 10                   | 200.0   | 12.0  | 50.0  |
| P6SMBJ7.5    | KN               | AN              | 7.5  | 8.33                        | 1                    | 100.0   | 14.3  | 42.0  |
| P6SMBJ7.5A   | KP               | AP              | 7.5  | 8.33                        | 1                    | 100.0   | 12.9  | 46.5  |
| P6SMBJ8.0    | KQ               | AQ              | 8.0  | 8.89                        | 1                    | 50.0  | 15.0  | 40.0  |
| P6SMBJ8.0A   | KR               | AR              | 8.0  | 8.89                        | 1                    | 50.0  | 13.6  | 44.1  |
| P6SMBJ8.5    | KS               | AS              | 8.5  | 9.44                        | 1                    | 20.0  | 15.9  | 37.7  |
| P6SMBJ8.5A   | KT               | AT              | 8.5  | 9.44                        | 1                    | 20.0  | 14.4  | 41.7  |
| P6SMBJ9.0    | KU               | AU              | 9.0  | 10.00                       | 1                    | 10.0  | 16.9  | 35.5  |
| P6SMBJ9.0A   | KV               | AV              | 9.0  | 10.00                       | 1                    | 10.0  | 15.4  | 39.0  |
| P6SMBJ10     | KW               | AW              | 10.0   | 11.10                       | 1                    | 5.0   | 18.8  | 31.9  |
| P6SMBJ10A    | KX               | AX              | 10.0   | 11.10                       | 1                    | 5.0   | 17.0  | 35.3  |
| P6SMBJ11     | KY               | AY              | 11.0   | 12.20                       | 1                    | 5.0   | 20.1  | 29.9  |
| P6SMBJ11A    | KZ               | AZ              | 11.0   | 12.20                       | 1                    | 5.0   | 18.2  | 33.0  |
| P6SMBJ12     | LD               | BD              | 12.0   | 13.30                       | 1                    | 5.0   | 22.0  | 27.3  |
| P6SMBJ12A    | LE               | BE              | 12.0   | 13.30                       | 1                    | 5.0   | 19.9  | 30.2  |
| P6SMBJ13     | LF               | BF              | 13.0   | 14.40                       | 1                    | 5.0   | 23.8  | 25.2  |
| P6SMBJ13A    | LG               | BG              | 13.0   | 14.40                       | 1                    | 5.0   | 21.5  | 27.9  |
| P6SMBJ14     | LH               | BH              | 14.0   | 15.60                       | 1                    | 5.0   | 25.8  | 23.3  |
| P6SMBJ14A    | LK               | BK              | 14.0   | 15.60                       | 1                    | 5.0   | 23.2  | 25.8  |

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**TVS Diodes - Surface Mount - 600 Watt Specifications - P6SMBJ Series Electrical Characteristics**  
- (Continued)

| Part Number* | Uni Part Marking | Bi Part Marking | Rated Standoff Voltage Vwm (Volts) | Breakdown Voltage |          | Maximum Stand By Current @Vwm+ Id (µA) | 10/1000µs Maximum Clamping Voltage @Ippm# Vc Max (Volts) | 10/1000µs Rated Peak Impulse Current Ippm# (Amperes) |
|--------------|------------------|-----------------|------------------------------------|-------------------|----------|--|--|--|
|              |                  |                 |                                    | Vbr Min (Volts)   | @It (mA) |  |  |  |
| P6SMBJ15     | LL               | BL              | 15.0                               | 16.70             | 1        | 5.0                                    | 26.9   | 22.3   |
| P6SMBJ15A    | LM               | BM              | 15.0                               | 16.70             | 1        | 5.0                                    | 24.4   | 24.0   |
| P6SMBJ16     | LN               | BN              | 16.0                               | 17.80             | 1        | 5.0                                    | 28.8   | 20.8   |
| P6SMBJ16A    | LP               | BP              | 16.0                               | 17.80             | 1        | 5.0                                    | 26.0   | 23.1   |
| P6SMBJ17     | LQ               | BQ              | 17.0                               | 18.90             | 1        | 5.0                                    | 30.5   | 19.7   |
| P6SMBJ17A    | LR               | BR              | 17.0                               | 18.90             | 1        | 5.0                                    | 27.6   | 21.7   |
| P6SMBJ18     | LS               | BS              | 18.0                               | 20.00             | 1        | 5.0                                    | 32.2   | 18.6   |
| P6SMBJ18A    | LT               | BT              | 18.0                               | 20.00             | 1        | 5.0                                    | 29.2   | 20.5   |
| P6SMBJ20     | LU               | BU              | 20.0                               | 22.20             | 1        | 5.0                                    | 35.8   | 16.7   |
| P6SMBJ20A    | LV               | BV              | 20.0                               | 22.20             | 1        | 5.0                                    | 32.4   | 18.5   |
| P6SMBJ22     | LW               | BW              | 22.0                               | 24.40             | 1        | 5.0                                    | 39.4   | 15.2   |
| P6SMBJ22A    | LX               | BX              | 22.0                               | 24.40             | 1        | 5.0                                    | 35.5   | 16.9   |
| P6SMBJ24     | LY               | BY              | 24.0                               | 26.70             | 1        | 5.0                                    | 43.0   | 14.0   |
| P6SMBJ24A    | LZ               | BZ              | 24.0                               | 26.70             | 1        | 5.0                                    | 38.9   | 15.4   |
| P6SMBJ26     | MD               | CD              | 26.0                               | 28.90             | 1        | 5.0                                    | 46.6   | 12.4   |
| P6SMBJ26A    | ME               | CE              | 26.0                               | 28.90             | 1        | 5.0                                    | 42.1   | 14.2   |
| P6SMBJ28     | MF               | CF              | 28.0                               | 31.10             | 1        | 5.0                                    | 50.0   | 12.0   |
| P6SMBJ28A    | MG               | CG              | 28.0                               | 31.10             | 1        | 5.0                                    | 45.4   | 13.2   |
| P6SMBJ30     | MH               | CH              | 30.0                               | 33.30             | 1        | 5.0                                    | 53.5   | 11.2   |
| P6SMBJ30A    | MK               | CK              | 30.0                               | 33.30             | 1        | 5.0                                    | 46.6   | 12.4   |
| P6SMBJ33     | ML               | CL              | 33.0                               | 36.70             | 1        | 5.0                                    | 59.0   | 10.2   |
| P6SMBJ33A    | MM               | CM              | 33.0                               | 36.70             | 1        | 5.0                                    | 53.3   | 11.3   |
| P6SMBJ36     | MN               | CN              | 36.0                               | 40.00             | 1        | 5.0                                    | 64.3   | 9.3  |
| P6SMBJ36A    | MP               | CP              | 36.0                               | 40.00             | 1        | 5.0                                    | 58.1   | 10.3   |
| P6SMBJ40     | MQ               | CQ              | 40.0                               | 44.40             | 1        | 5.0                                    | 71.4   | 8.4  |
| P6SMBJ40A    | MR               | CR              | 40.0                               | 44.40             | 1        | 5.0                                    | 64.5   | 9.3  |

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**TVS Diodes - Surface Mount - 600 Watt Specifications - P6SMBJ Series Electrical Characteristics**  
- (Continued)

| Part Number* | Uni Part Marking | Bi Part Marking | Rated Standoff Voltage V <sub>wm</sub><br>(Volts) | Breakdown Voltage              |                         | Maximum Stand By Current @V <sub>wm</sub> + I <sub>d</sub><br>( $\mu$ A) | 10/1000 $\mu$ s Maximum Clamping Voltage @I <sub>ppm</sub> # V <sub>c</sub> Max<br>(Volts) | 10/1000 $\mu$ s Rated Peak Impulse Current I <sub>ppm</sub> #<br>(Amperes) |
|--------------|------------------|-----------------|---|--------------------------------|-------------------------|--|--|--|
|              |                  |                 |   | V <sub>br</sub> Min<br>(Volts) | @I <sub>t</sub><br>(mA) |  |  |  |
| P6SMBJ43     | MS               | CS              | 43.0  | 47.80                          | 1                       | 5.0  | 76.7   | 7.8  |
| P6SMBJ43A    | MT               | CT              | 43.0  | 47.80                          | 1                       | 5.0  | 69.4   | 8.6  |
| P6SMBJ45     | MU               | CU              | 45.0  | 50.00                          | 1                       | 5.0  | 80.3   | 7.5  |
| P6SMBJ45A    | MV               | CV              | 45.0  | 50.00                          | 1                       | 5.0  | 72.7   | 8.3  |
| P6SMBJ48     | MW               | CW              | 48.0  | 53.30                          | 1                       | 5.0  | 85.5   | 7.0  |
| P6SMBJ48A    | MX               | CX              | 48.0  | 53.30                          | 1                       | 5.0  | 77.4   | 7.7  |
| P6SMBJ51     | MY               | CY              | 51.0  | 56.70                          | 1                       | 5.0  | 91.1   | 6.6  |
| P6SMBJ51A    | MZ               | CZ              | 51.0  | 56.70                          | 1                       | 5.0  | 82.4   | 7.3  |
| P6SMBJ54     | ND               | DD              | 54.0  | 60.00                          | 1                       | 5.0  | 96.3   | 6.2  |
| P6SMBJ54A    | NE               | DE              | 54.0  | 60.00                          | 1                       | 5.0  | 87.1   | 6.9  |
| P6SMBJ58     | NF               | DF              | 58.0  | 64.40                          | 1                       | 5.0  | 103.0  | 5.8  |
| P6SMBJ58A    | NG               | DG              | 58.0  | 64.40                          | 1                       | 5.0  | 93.6   | 6.4  |
| P6SMBJ60     | NH               | DH              | 60.0  | 66.70                          | 1                       | 5.0  | 107.0  | 5.6  |
| P6SMBJ60A    | NK               | DK              | 60.0  | 66.70                          | 1                       | 5.0  | 96.8   | 6.2  |
| P6SMBJ64     | NL               | DL              | 64.0  | 71.10                          | 1                       | 5.0  | 114.0  | 5.3  |
| P6SMBJ64A    | NM               | DM              | 64.0  | 71.10                          | 1                       | 5.0  | 103.0  | 5.8  |
| P6SMBJ70     | NN               | DN              | 70.0  | 77.80                          | 1                       | 5.0  | 125.0  | 4.8  |
| P6SMBJ70A    | NP               | DP              | 70.0  | 77.80                          | 1                       | 5.0  | 113.0  | 5.3  |
| P6SMBJ75     | NQ               | DQ              | 75.0  | 83.30                          | 1                       | 5.0  | 134.0  | 4.5  |
| P6SMBJ75A    | NR               | DR              | 75.0  | 83.30                          | 1                       | 5.0  | 121.0  | 4.9  |
| P6SMBJ78     | NS               | DS              | 78.0  | 86.70                          | 1                       | 5.0  | 139.0  | 4.3  |
| P6SMBJ78A    | NT               | DT              | 78.0  | 86.70                          | 1                       | 5.0  | 126.0  | 4.7  |
| P6SMBJ85     | NU               | DU              | 85.0  | 94.40                          | 1                       | 5.0  | 151.0  | 3.9  |
| P6SMBJ85A    | NV               | DV              | 85.0  | 94.40                          | 1                       | 5.0  | 137.0  | 4.4  |
| P6SMBJ90     | NW               | DW              | 90.0  | 100.00                         | 1                       | 5.0  | 160.0  | 3.8  |
| P6SMBJ90A    | NX               | DX              | 90.0  | 100.00                         | 1                       | 5.0  | 146.0  | 4.1  |

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- (Continued)

| Part Number* | Uni Part Marking | Bi Part Marking | Rated Standoff Voltage V <sub>wm</sub><br>(Volts) | Breakdown Voltage              |                         | Maximum Stand By Current @V <sub>wm</sub> + I <sub>d</sub><br>( $\mu$ A) | 10/1000 $\mu$ s Maximum Clamping Voltage @I <sub>ppm</sub> #<br>V <sub>c</sub> Max<br>(Volts) | 10/1000 $\mu$ s Rated Peak Impulse Current I <sub>ppm</sub> #<br>(Amperes) |
|--------------|------------------|-----------------|---|--------------------------------|-------------------------|--|---|--|
|              |                  |                 |   | V <sub>br</sub> Min<br>(Volts) | @I <sub>t</sub><br>(mA) |  |   |  |
| P6SMBJ100    | NY               | DY              | 100.0   | 111.00                         | 1                       | 5.0  | 179.0   | 3.4  |
| P6SMBJ100A   | NZ               | DZ              | 100.0   | 111.00                         | 1                       | 5.0  | 162.0   | 3.7  |
| P6SMBJ110    | PD               | ED              | 110.0   | 122.00                         | 1                       | 5.0  | 196.0   | 3.0  |
| P6SMBJ110A   | PE               | EE              | 110.0   | 122.00                         | 1                       | 5.0  | 177.0   | 3.4  |
| P6SMBJ120    | PF               | EF              | 120.0   | 133.00                         | 1                       | 5.0  | 214.0   | 2.8  |
| P6SMBJ120A   | PG               | EG              | 120.0   | 133.00                         | 1                       | 5.0  | 193.0   | 3.1  |
| P6SMBJ130    | PH               | EH              | 130.0   | 144.00                         | 1                       | 5.0  | 231.0   | 2.6  |
| P6SMBJ130A   | PK               | EK              | 130.0   | 144.00                         | 1                       | 5.0  | 209.0   | 2.9  |
| P6SMBJ150    | PL               | EL              | 150.0   | 167.00                         | 1                       | 5.0  | 268.0   | 2.2  |
| P6SMBJ150A   | PM               | EM              | 150.0   | 167.00                         | 1                       | 5.0  | 243.0   | 2.5  |
| P6SMBJ160    | PN               | EN              | 160.0   | 178.00                         | 1                       | 5.0  | 287.0   | 2.1  |
| P6SMBJ160A   | PP               | EP              | 160.0   | 178.00                         | 1                       | 5.0  | 259.0   | 2.3  |
| P6SMBJ170    | PQ               | EQ              | 170.0   | 189.00                         | 1                       | 5.0  | 304.0   | 2.0  |
| P6SMBJ170A   | PR               | ER              | 170.0   | 189.00                         | 1                       | 5.0  | 275.0   | 2.2  |

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## TVS Diodes - Surface Mount - 600 Watt - P6SMBJ Series Features

### P6SMBJ Series Features

- 600 watt peak pulse power dissipation
- Available in voltages from 5.0V to 170V
- Unidirectional and bidirectional
- Glass passivated junction
- Low clamping factor
- Available in bulk or tape and reel (Reel quantity = 3,000 pieces)
- Each device 100% surge tested
- Tape and Reel to EIA Standard RS-481-A
- UL 497B Recognized, File # E135015 (5.0V - 75V)

### Absolute Maximum Ratings

- Peak pulse power dissipation (Pppm) at 25°C..... 600W
- Steady state power dissipation at 25°C ..... 5W
- Operating and storage temperatures..... -55°C to + 150°C

### Mechanical Characteristics

- DO214AA package
- UL94V-0 Thermoset Epoxy
- Solder plated terminals
- Solderable per MIL-STD-750 Method 2026

### Mechanical Dimensions

