

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

| 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) | | | |
| 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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|--------------|------------------|-----------------|---|--------------------------------|-------------------------|--|--|--|
| | | | | V _{br} Min (Volts) | @I _t (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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| Part Number* | Uni Part Marking | Bi Part Marking | Rated Standoff Voltage V _{wm} (Volts) | Breakdown Voltage | | Maximum Stand By Current @V _{wm} + Id (μ A) | 10/1000 μ s Maximum Clamping Voltage @I _{ppm} # V _c Max (Volts) | 10/1000 μ s Rated Peak Impulse Current I _{ppm} # (Amperes) |
|--------------|------------------|-----------------|---|--------------------------------|-------------------------|--|--|--|
| | | | | V _{br} Min (Volts) | @I _t (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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| Part Number* | Uni Part Marking | Bi Part Marking | Rated Standoff Voltage V _{wm} (Volts) | Breakdown Voltage | | Maximum Stand By Current @V _{wm} + I _d (μA) | 10/1000μs Maximum Clamping Voltage @I _{ppm} # V _c Max (Volts) | 10/1000μs Rated Peak Impulse Current I _{ppm} # (Amperes) |
|--------------|------------------|-----------------|---|--------------------------------|-------------------------|--|--|--|
| | | | | V _{br} Min (Volts) | @I _t (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

