

P6SMBJ Series – 600 Watt Surface Mount



P6SMBJ Series Features

- RoHS Compliance designated by suffix “F”
- 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 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)

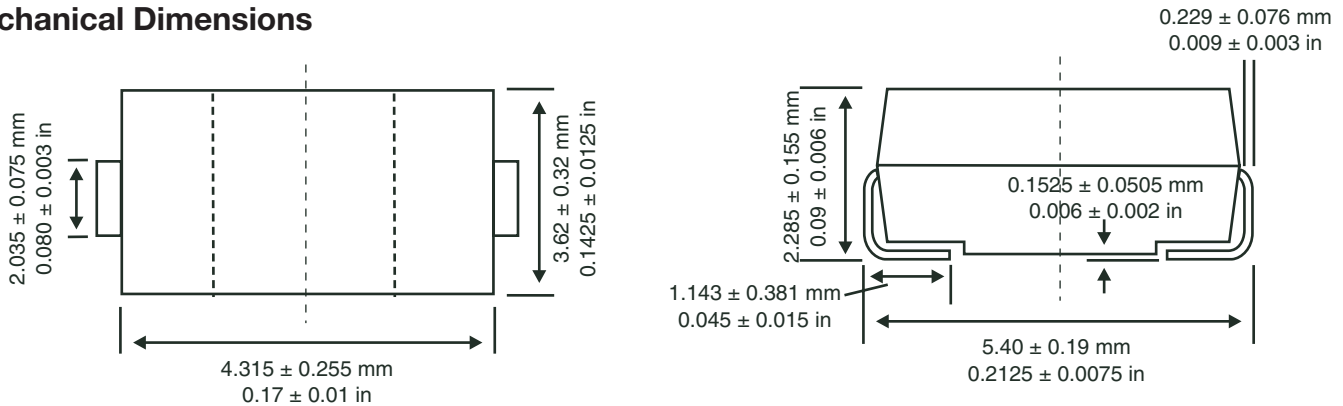
Absolute Maximum Ratings

| Parameter | Value |
|---|------------------|
| 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 |

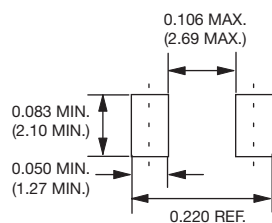
Mechanical Characteristics

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

Mechanical Dimensions



Standard Mounting Pad Layout



All dimensions in inches and (millimeters)

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Electrical Characteristics

| Part Number* | Uni Part Marking | Bi Part Marking | Rated Standoff Voltage V _{wm} | Breakdown Voltage | | | Maximum Stand By Current @V _{WM} + I _d | 10/1000 μ s Maximum Clamping Voltage @I _{ppm} # V _c Max | 10/1000 μ s Rated Peak Impulse Current I _{ppm} # |
|--------------|------------------|-----------------|--|-------------------------|-------|-----------------|--|---|---|
| | | | | V _{br} (Volts) | | @I _t | | | |
| | | | | (Volts) | Min | Max | | | |
| P6SMBJ5.0 | KD | AD | 5 | 6.4 | 7.55 | 10 | 800 | 9.6 | 62.5 |
| P6SMBJ5.0A | KE | AE | 5 | 6.4 | 7.25 | 10 | 800 | 9.2 | 65.2 |
| P6SMBJ6.0 | KF | AF | 6 | 6.67 | 8.45 | 10 | 800 | 11.4 | 52.6 |
| P6SMBJ6.0A | KG | AG | 6 | 6.67 | 7.65 | 10 | 800 | 10.3 | 58.3 |
| P6SMBJ6.5 | KH | AH | 6.5 | 7.22 | 9.14 | 10 | 500 | 12.3 | 48.7 |
| P6SMBJ6.5A | KK | AK | 6.5 | 7.22 | 8.3 | 10 | 500 | 11.2 | 53.6 |
| P6SMBJ7.0 | KL | AL | 7 | 7.78 | 9.86 | 10 | 200 | 13.3 | 45.1 |
| P6SMBJ7.0A | KM | AM | 7 | 7.78 | 8.95 | 10 | 200 | 12 | 50 |
| P6SMBJ7.5 | KN | AN | 7.5 | 8.33 | 10.8 | 1 | 100 | 14.3 | 42 |
| P6SMBJ7.5A | KP | AP | 7.5 | 8.33 | 9.58 | 1 | 100 | 12.9 | 46.5 |
| P6SMBJ8.0 | KQ | AQ | 8 | 8.89 | 11.3 | 1 | 50 | 15 | 40 |
| P6SMBJ8.0A | KR | AR | 8 | 8.89 | 10.2 | 1 | 50 | 13.6 | 44.1 |
| P6SMBJ8.5 | KS | AS | 8.5 | 9.44 | 11.9 | 1 | 20 | 15.9 | 37.7 |
| P6SMBJ8.5A | KT | AT | 8.5 | 9.44 | 10.8 | 1 | 20 | 14.4 | 41.7 |
| P6SMBJ9.0 | KU | AU | 9 | 10 | 12.8 | 1 | 10 | 16.9 | 35.5 |
| P6SMBJ9.0A | KV | AV | 9 | 10 | 11.5 | 1 | 10 | 15.4 | 39 |
| P6SMBJ10 | KW | AW | 10 | 11.1 | 14.1 | 1 | 5 | 18.8 | 31.9 |
| P6SMBJ10A | KX | AX | 10 | 11.1 | 12.8 | 1 | 5 | 17 | 35.3 |
| P6SMBJ11 | KY | AY | 11 | 12.2 | 15.4 | 1 | 5 | 20.1 | 29.9 |
| P6SMBJ11A | KZ | AZ | 11 | 12.2 | 14.4 | 1 | 5 | 18.2 | 33 |
| P6SMBJ12 | LD | BD | 12 | 13.3 | 16.9 | 1 | 5 | 22 | 27.3 |
| P6SMBJ12A | LE | BE | 12 | 13.3 | 15.3 | 1 | 5 | 19.9 | 30.2 |
| P6SMBJ13 | LF | BF | 13 | 14.4 | 18.2 | 1 | 5 | 23.8 | 25.2 |
| P6SMBJ13A | LG | BG | 13 | 14.4 | 16.15 | 1 | 5 | 21.5 | 27.9 |
| P6SMBJ14 | LH | BH | 14 | 15.6 | 19.8 | 1 | 5 | 25.8 | 23.3 |
| P6SMBJ14A | LK | BK | 14 | 15.6 | 17.9 | 1 | 5 | 23.2 | 25.8 |

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= See General Information for Impulse Current Waveform.

For Pb-Free add suffix – "F"

P6SMBJ Series – 600 Watt Surface Mount**Electrical Characteristics (continued)**

| Part Number* | Uni Part Marking | Bi Part Marking | Rated Standoff Voltage V _{wm} | Breakdown Voltage | | | Maximum Stand By Current @V _{WM} + I _d | 10/1000 μ s Maximum Clamping Voltage @I _{ppm} # V _c Max | 10/1000 μ s Rated Peak Impulse Current I _{ppm} # |
|--------------|------------------|-----------------|--|-------------------------|------|-----------------|--|---|---|
| | | | | V _{br} (Volts) | | @I _t | | | |
| | | | | (Volts) | Min | Max | | | |
| P6SMBJ15 | LL | BL | 15 | 16.7 | 21.1 | 1 | 5 | 26.9 | 22.3 |
| P6SMBJ15A | LM | BM | 15 | 16.7 | 19.2 | 1 | 5 | 24.4 | 24 |
| P6SMBJ16 | LN | BN | 16 | 17.8 | 22.6 | 1 | 5 | 28.8 | 20.8 |
| P6SMBJ16A | LP | BP | 16 | 17.8 | 20.5 | 1 | 5 | 26 | 23.1 |
| P6SMBJ17 | LQ | BQ | 17 | 18.9 | 23.9 | 1 | 5 | 30.5 | 19.7 |
| P6SMBJ17A | LR | BR | 17 | 18.9 | 21.7 | 1 | 5 | 27.6 | 21.7 |
| P6SMBJ18 | LS | BS | 18 | 20 | 25.3 | 1 | 5 | 32.2 | 18.6 |
| P6SMBJ18A | LT | BT | 18 | 20 | 23.3 | 1 | 5 | 29.2 | 20.5 |
| P6SMBJ20 | LU | BU | 20 | 22.2 | 28.1 | 1 | 5 | 35.8 | 16.7 |
| P6SMBJ20A | LV | BV | 20 | 22.2 | 25.5 | 1 | 5 | 32.4 | 18.5 |
| P6SMBJ22 | LW | BW | 22 | 24.4 | 30.9 | 1 | 5 | 39.4 | 15.2 |
| P6SMBJ22A | LX | BX | 22 | 24.4 | 28 | 1 | 5 | 35.5 | 16.9 |
| P6SMBJ24 | LY | BY | 24 | 26.7 | 33.8 | 1 | 5 | 43 | 14 |
| P6SMBJ24A | LZ | BZ | 24 | 26.7 | 30.7 | 1 | 5 | 38.9 | 15.4 |
| P6SMBJ26 | MD | CD | 26 | 28.9 | 36.8 | 1 | 5 | 46.6 | 12.4 |
| P6SMBJ26A | ME | CE | 26 | 28.9 | 32.2 | 1 | 5 | 42.1 | 14.2 |
| P6SMBJ28 | MF | CF | 28 | 31.1 | 39.4 | 1 | 5 | 50 | 12 |
| P6SMBJ28A | MG | CG | 28 | 31.1 | 35.8 | 1 | 5 | 45.4 | 13.2 |
| P6SMBJ30 | MH | CH | 30 | 33.3 | 42.4 | 1 | 5 | 53.5 | 11.2 |
| P6SMBJ30A | MK | CK | 30 | 33.3 | 38.3 | 1 | 5 | 46.6 | 12.4 |
| P6SMBJ33 | ML | CL | 33 | 36.7 | 46.9 | 1 | 5 | 59 | 10.2 |
| P6SMBJ33A | MM | CM | 33 | 36.7 | 42.2 | 1 | 5 | 53.3 | 11.3 |
| P6SMBJ36 | MN | CN | 36 | 40 | 50.7 | 1 | 5 | 64.3 | 9.3 |
| P6SMBJ36A | MP | CP | 36 | 40 | 46 | 1 | 5 | 58.1 | 10.3 |
| P6SMBJ40 | MQ | CQ | 40 | 44.4 | 56.3 | 1 | 5 | 71.4 | 8.4 |
| P6SMBJ40A | MR | CR | 40 | 44.4 | 51.1 | 1 | 5 | 64.5 | 9.3 |

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| Part Number* | Uni Part Marking | Bi Part Marking | Rated Standoff Voltage V _{wm} | Breakdown Voltage | | | Maximum Stand By Current @V _{WM} + I _d | 10/1000 μ s Maximum Clamping Voltage @I _{ppm} # V _c Max | 10/1000 μ s Rated Peak Impulse Current I _{ppm} # |
|--------------|------------------|-----------------|--|-------------------------|-------|-----------------|--|---|---|
| | | | | V _{br} (Volts) | | @I _t | | | |
| | | | | (Volts) | Min | Max | | | |
| P6SMBJ43 | MS | CS | 43 | 47.8 | 60.5 | 1 | 5 | 76.7 | 7.8 |
| P6SMBJ43A | MT | CT | 43 | 47.8 | 54.9 | 1 | 5 | 69.4 | 8.6 |
| P6SMBJ45 | MU | CU | 45 | 50 | 63.3 | 1 | 5 | 80.3 | 7.5 |
| P6SMBJ45A | MV | CV | 45 | 50 | 57.5 | 1 | 5 | 72.7 | 8.3 |
| P6SMBJ48 | MW | CW | 48 | 53.3 | 67.5 | 1 | 5 | 85.5 | 7 |
| P6SMBJ48A | MX | CX | 48 | 53.3 | 61.3 | 1 | 5 | 77.4 | 7.7 |
| P6SMBJ51 | MY | CY | 51 | 56.7 | 71.8 | 1 | 5 | 91.1 | 6.6 |
| P6SMBJ51A | MZ | CZ | 51 | 56.7 | 65.2 | 1 | 5 | 82.4 | 7.3 |
| P6SMBJ54 | ND | DD | 54 | 60 | 76 | 1 | 5 | 96.3 | 6.2 |
| P6SMBJ54A | NE | DE | 54 | 60 | 69 | 1 | 5 | 87.1 | 6.9 |
| P6SMBJ58 | NF | DF | 58 | 64.4 | 81.6 | 1 | 5 | 103 | 5.8 |
| P6SMBJ58A | NG | DG | 58 | 64.4 | 74.6 | 1 | 5 | 93.6 | 6.4 |
| P6SMBJ60 | NH | DH | 60 | 66.7 | 84.5 | 1 | 5 | 107 | 5.6 |
| P6SMBJ60A | NK | DK | 60 | 66.7 | 76.6 | 1 | 5 | 96.8 | 6.2 |
| P6SMBJ64 | NL | DL | 64 | 71.1 | 90.1 | 1 | 5 | 114 | 5.3 |
| P6SMBJ64A | NM | DM | 64 | 71.1 | 81.8 | 1 | 5 | 103 | 5.8 |
| P6SMBJ70 | NN | DN | 70 | 77.8 | 98.6 | 1 | 5 | 125 | 4.8 |
| P6SMBJ70A | NP | DP | 70 | 77.8 | 89.5 | 1 | 5 | 113 | 5.3 |
| P6SMBJ75 | NQ | DQ | 75 | 83.3 | 106 | 1 | 5 | 134 | 4.5 |
| P6SMBJ75A | NR | DR | 75 | 83.3 | 95.8 | 1 | 5 | 121 | 4.9 |
| P6SMBJ78 | NS | DS | 78 | 86.7 | 110 | 1 | 5 | 139 | 4.3 |
| P6SMBJ78A | NT | DT | 78 | 86.7 | 99.7 | 1 | 5 | 126 | 4.7 |
| P6SMBJ85 | NU | DU | 85 | 94.4 | 119.2 | 1 | 5 | 151 | 3.9 |
| P6SMBJ85A | NV | DV | 85 | 94.4 | 108.2 | 1 | 5 | 137 | 4.4 |
| P6SMBJ90 | NW | DW | 90 | 100 | 126.5 | 1 | 5 | 160 | 3.8 |
| P6SMBJ90A | NX | DX | 90 | 100 | 115.5 | 1 | 5 | 146 | 4.1 |

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|--------------|------------------|-----------------|--|-------------------------|-------|-----------------|--|---|---|
| | | | | V _{br} (Volts) | | @I _t | | | |
| | | | | (Volts) | Min | Max | | | |
| P6SMBJ100 | NY | DY | 100 | 111 | 141 | 1 | 5 | 179 | 3.4 |
| P6SMBJ100A | NZ | DZ | 100 | 111 | 128 | 1 | 5 | 162 | 3.7 |
| P6SMBJ110 | PD | ED | 110 | 122 | 154 | 1 | 5 | 196 | 3 |
| P6SMBJ110A | PE | EE | 110 | 122 | 140 | 1 | 5 | 177 | 3.4 |
| P6SMBJ120 | PF | EF | 120 | 133 | 169 | 1 | 5 | 214 | 2.8 |
| P6SMBJ120A | PG | EG | 120 | 133 | 153 | 1 | 5 | 193 | 3.1 |
| P6SMBJ130 | PH | EH | 130 | 144 | 182 | 1 | 5 | 231 | 2.6 |
| P6SMBJ130A | PK | EK | 130 | 144 | 165 | 1 | 5 | 209 | 2.9 |
| P6SMBJ150 | PL | EL | 150 | 167 | 211.5 | 1 | 5 | 268 | 2.2 |
| P6SMBJ150A | PM | EM | 150 | 167 | 192 | 1 | 5 | 243 | 2.5 |
| P6SMBJ160 | PN | EN | 160 | 178 | 226 | 1 | 5 | 287 | 2.1 |
| P6SMBJ160A | PP | EP | 160 | 178 | 205 | 1 | 5 | 259 | 2.3 |
| P6SMBJ170 | PQ | EQ | 170 | 189 | 239.5 | 1 | 5 | 304 | 2 |
| P6SMBJ170A | PR | ER | 170 | 189 | 217.5 | 1 | 5 | 275 | 2.2 |

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