



P6SMBJ8.5AS ~ P6SMBJ220CAS Series

Transient Voltage Suppressor

Recongnized File # E210467 (P6SMBJ8.5AS ~ P6SMBJ170CAS Series)

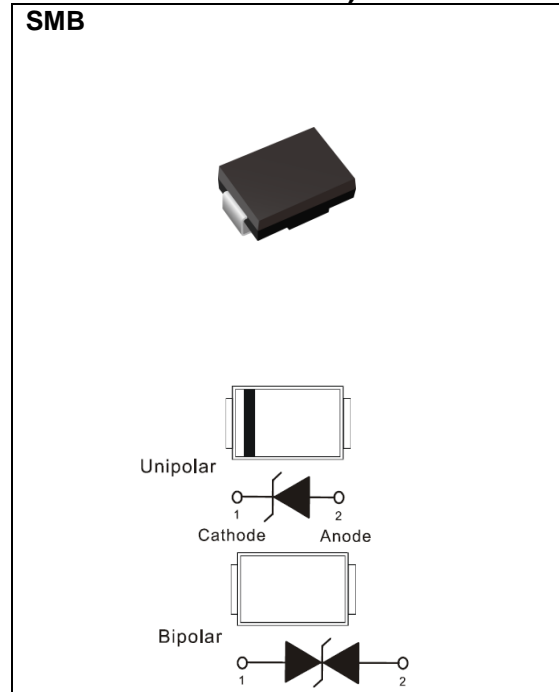
Voltage 8.5~220 V **Power** 600 W

Features

- Fast response time
- Low incremental surge resistance
- Ultra thin profile package for space constrained utilization.
- High temperature soldering : 260°C/10 seconds at terminals
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case : Molded plastic, SMB
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0032 ounces, 0.092 grams



Maximum Ratings and Thermal Characteristics (T_A = 25 °C unless otherwise noted)

| PARAMETER | SYMBOL | LIMIT | UNITS |
|---|-------------------------|-------------|-------|
| Peak Pulse Power Dissipation(tp = 10 / 1000 us) | P _{PP} (1) (2) | 600 | W |
| Peak Pulse Current on tp = 10 / 1000 us waveform(Fig.2) | I _{PPM} (1) | See table 1 | A |
| Power Dissipation on Infinite Heat Sink at T _L = 50 °C | P _D | 5 | W |
| ESD IEC61000-4-2(Air) | V _{ESD} | ±30 | kV |
| ESD IEC61000-4-2(Contact) | | ±30 | |
| Typical Thermal Resistance Junction to Ambient | R _{θJA} (3) | 150 | °C/W |
| Operating Junction Temperature Range | T _J | -55~150 | °C |
| Storage Temperature Range | T _{STG} | -55~150 | °C |



P6SMBJ8.5AS ~ P6SMBJ220CAS Series

Electrical Characteristics (T_A = 25 °C unless otherwise noted)

| Part Number | | V _{RWM} | V _{BR} | | | I _R | | V _{C@IPP} | | Marking Code | |
|-----------------------------------|--------------|------------------|-----------------|------|----------------|--------------------|----|--------------------|------|--------------|--------|
| | | | Min. | Max. | I _T | @ V _{RWM} | | | | | |
| UNI | BI | V | V | V | mA | UNI | BI | V | A | UNI | BI |
| 600W Transient Voltage Suppressor | | | | | | | | | | | |
| P6SMBJ8.5AS | P6SMBJ8.5CAS | 8.5 | 9.44 | 10.4 | 1 | 10 | 20 | 14.4 | 41.7 | B8V5AS | 8V5CAS |
| P6SMBJ9.0AS | P6SMBJ9.0CAS | 9 | 10 | 11.1 | 1 | 5 | 5 | 15.4 | 39 | B9V0AS | B9VCAS |
| P6SMBJ10AS | P6SMBJ10CAS | 10 | 11.1 | 12.3 | 1 | 5 | 5 | 17 | 35.3 | B10AS | B10CAS |
| P6SMBJ11AS | P6SMBJ11CAS | 11 | 12.2 | 13.5 | 1 | 5 | 5 | 18.2 | 33 | B11AS | B11CAS |
| P6SMBJ12AS | P6SMBJ12CAS | 12 | 13.3 | 14.7 | 1 | 1 | 1 | 19.9 | 30.2 | B12AS | B12CAS |
| P6SMBJ13AS | P6SMBJ13CAS | 13 | 14.4 | 15.9 | 1 | 1 | 1 | 21.5 | 28 | B13AS | B13CAS |
| P6SMBJ14AS | P6SMBJ14CAS | 14 | 15.6 | 17.2 | 1 | 1 | 1 | 23.2 | 25.8 | B14AS | B14CAS |
| P6SMBJ15AS | P6SMBJ15CAS | 15 | 16.7 | 18.5 | 1 | 1 | 1 | 24.4 | 24.6 | B15AS | B15CAS |
| P6SMBJ16AS | P6SMBJ16CAS | 16 | 17.8 | 19.7 | 1 | 1 | 1 | 26 | 23.1 | B16AS | B16CAS |
| P6SMBJ17AS | P6SMBJ17CAS | 17 | 18.9 | 20.9 | 1 | 1 | 1 | 27.6 | 21.8 | B17AS | B17CAS |
| P6SMBJ18AS | P6SMBJ18CAS | 18 | 20 | 22.1 | 1 | 1 | 1 | 29.2 | 20.6 | B18AS | B18CAS |
| P6SMBJ20AS | P6SMBJ20CAS | 20 | 22.2 | 24.5 | 1 | 1 | 1 | 32.4 | 18.6 | B20AS | B20CAS |
| P6SMBJ22AS | P6SMBJ22CAS | 22 | 24.4 | 26.9 | 1 | 1 | 1 | 35.5 | 16.9 | B22AS | B22CAS |
| P6SMBJ24AS | P6SMBJ24CAS | 24 | 26.7 | 29.5 | 1 | 1 | 1 | 38.9 | 15.5 | B24AS | B24CAS |
| P6SMBJ26AS | P6SMBJ26CAS | 26 | 28.9 | 31.9 | 1 | 1 | 1 | 42.1 | 14.3 | B26AS | B26CAS |
| P6SMBJ28AS | P6SMBJ28CAS | 28 | 31.1 | 34.4 | 1 | 1 | 1 | 45.4 | 13.3 | B28AS | B28CAS |
| P6SMBJ30AS | P6SMBJ30CAS | 30 | 33.3 | 36.8 | 1 | 1 | 1 | 48.4 | 12.4 | B30AS | B30CAS |
| P6SMBJ33AS | P6SMBJ33CAS | 33 | 36.7 | 40.6 | 1 | 1 | 1 | 53.3 | 11.3 | B33AS | B33CAS |
| P6SMBJ36AS | P6SMBJ36CAS | 36 | 40 | 44.2 | 1 | 1 | 1 | 58.1 | 10.4 | B36AS | B36CAS |
| P6SMBJ40AS | P6SMBJ40CAS | 40 | 44.4 | 49.1 | 1 | 1 | 1 | 64.5 | 9.3 | B40AS | B40CAS |
| P6SMBJ43AS | P6SMBJ43CAS | 43 | 47.8 | 52.8 | 1 | 1 | 1 | 69.4 | 8.7 | B43AS | B43CAS |
| P6SMBJ45AS | P6SMBJ45CAS | 45 | 50 | 55.3 | 1 | 1 | 1 | 72.7 | 8.7 | B45AS | B45CAS |
| P6SMBJ48AS | P6SMBJ48CAS | 48 | 53.3 | 58.9 | 1 | 1 | 1 | 77.4 | 8.3 | B48AS | B48CAS |
| P6SMBJ51AS | P6SMBJ51CAS | 51 | 56.7 | 62.7 | 1 | 1 | 1 | 82.4 | 7.3 | B51AS | B51CAS |
| P6SMBJ54AS | P6SMBJ54CAS | 54 | 60 | 66.3 | 1 | 1 | 1 | 87.1 | 6.9 | B54AS | B54CAS |
| P6SMBJ58AS | P6SMBJ58CAS | 58 | 64.4 | 71.2 | 1 | 1 | 1 | 93.6 | 6.5 | B58AS | B58CAS |
| P6SMBJ60AS | P6SMBJ60CAS | 60 | 66.7 | 73.7 | 1 | 1 | 1 | 96.8 | 6.2 | B60AS | B60CAS |
| P6SMBJ64AS | P6SMBJ64CAS | 64 | 71.1 | 78.6 | 1 | 1 | 1 | 103 | 5.9 | B64AS | B64CAS |
| P6SMBJ70AS | P6SMBJ70CAS | 70 | 77.8 | 86 | 1 | 1 | 1 | 113 | 5.3 | B70AS | B70CAS |
| P6SMBJ75AS | P6SMBJ75CAS | 75 | 83.3 | 92.1 | 1 | 1 | 1 | 121 | 5 | B75AS | B75CAS |



P6SMBJ8.5AS ~ P6SMBJ220CAS Series

Electrical Characteristics (T_A = 25 °C unless otherwise noted)

| Part Number | | V _{RWM} | V _{BR} | | | I _R | | V _{C@IPP} | | Marking Code | |
|-----------------------------------|--------------|------------------|-----------------|-------|----------------|--------------------|----|--------------------|-----|--------------|--------|
| | | | Min. | Max. | I _T | @ V _{RWM} | uA | | | | |
| UNI | BI | V | V | V | mA | UNI | BI | V | A | UNI | BI |
| 600W Transient Voltage Suppressor | | | | | | | | | | | |
| P6SMBJ78AS | P6SMBJ78CAS | 78 | 86.7 | 95.8 | 1 | 1 | 1 | 126 | 4.8 | B78AS | B78CAS |
| P6SMBJ85AS | P6SMBJ85CAS | 85 | 94.4 | 104 | 1 | 1 | 1 | 137 | 4.4 | B85AS | B85CAS |
| P6SMBJ90AS | P6SMBJ90CAS | 90 | 100 | 111 | 1 | 1 | 1 | 147 | 4.1 | B90AS | B90CAS |
| P6SMBJ100AS | P6SMBJ100CAS | 100 | 111 | 123 | 1 | 1 | 1 | 162 | 3.7 | B100AS | 100CAS |
| P6SMBJ110AS | P6SMBJ110CAS | 110 | 122 | 135 | 1 | 1 | 1 | 177 | 3.4 | B110AS | 110CAS |
| P6SMBJ120AS | P6SMBJ120CAS | 120 | 133 | 147 | 1 | 1 | 1 | 193 | 3.1 | B120AS | 120CAS |
| P6SMBJ130AS | P6SMBJ130CAS | 130 | 144 | 159 | 1 | 1 | 1 | 209 | 2.9 | B130AS | 130CAS |
| P6SMBJ150AS | P6SMBJ150CAS | 150 | 167 | 185 | 1 | 1 | 1 | 243 | 2.5 | B150AS | 150CAS |
| P6SMBJ160AS | P6SMBJ160CAS | 160 | 178 | 197 | 1 | 1 | 1 | 259 | 2.3 | B160AS | 160CAS |
| P6SMBJ170AS | P6SMBJ170CAS | 170 | 189 | 209 | 1 | 1 | 1 | 275 | 2.2 | B170AS | 170CAS |
| P6SMBJ180AS | P6SMBJ180CAS | 180 | 198 | 222 | 1 | 1 | 1 | 292 | 2.1 | B180AS | 180CAS |
| P6SMBJ190AS | P6SMBJ190CAS | 190 | 209 | 243.2 | 1 | 1 | 1 | 308 | 2 | B190AS | 190CAS |
| P6SMBJ200AS | P6SMBJ200CAS | 200 | 220 | 247 | 1 | 1 | 1 | 324 | 1.9 | B200AS | 200CAS |
| P6SMBJ210AS | P6SMBJ210CAS | 210 | 231 | 268.8 | 1 | 1 | 1 | 340 | 1.8 | B210AS | 210CAS |
| P6SMBJ220AS | P6SMBJ220CAS | 220 | 242 | 272 | 1 | 1 | 1 | 356 | 1.7 | B220AS | 220CAS |

Notes :

1. Non-repetitive current pulse, per Fig.3 and derated above T_A=25°C per Fig.2
2. Mounted on 100cm² copper pads to each terminal
3. Mounted on a FR4 PCB, single-sided copper, standard footprint



P6SMBJ8.5AS ~ P6SMBJ220CAS Series

TYPICAL CHARACTERISTIC CURVES

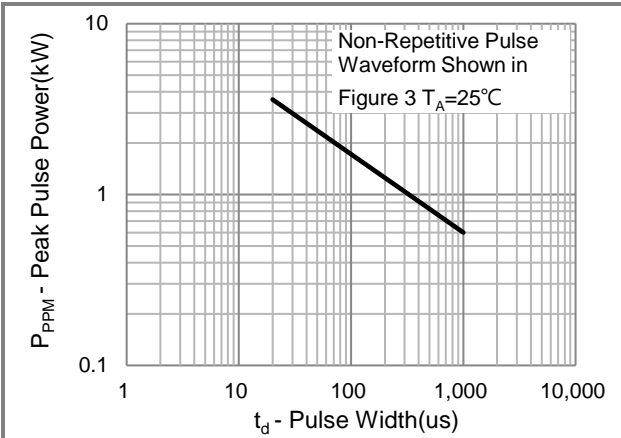


Fig.1 Pulse Power Rating Curve



Fig.2 Derating Curve

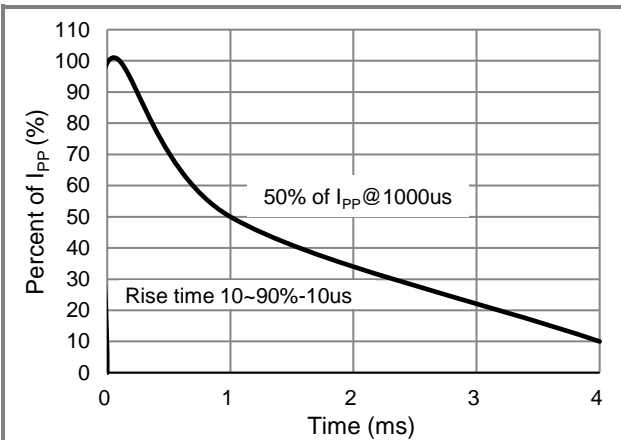


Fig.3 10/1000us Pulse Waveform

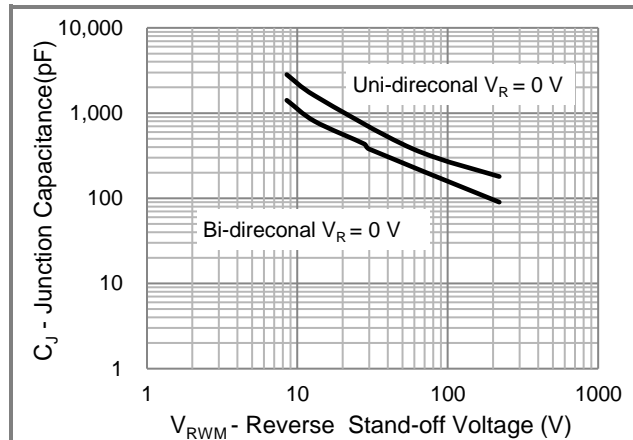


Fig.4 Typical Capacitance



P6SMBJ8.5AS ~ P6SMBJ220CAS Series

Part No. Packing Code Version

| Part No. Packing Code | Package Type | Packing Type | Marking | Version |
|-----------------------|--------------|--------------------|-----------|--------------------------------|
| P6SMBJxxxxAS_R1_00001 | SMB | 0.8K pcs / 7" reel | See Table | Halogen free RoHS compliant |

Packaging Information & Mounting Pad Layout

