



P4SMA10AS ~ P4SMA250CAS Series

Surface Mount Transient Voltage Suppressor

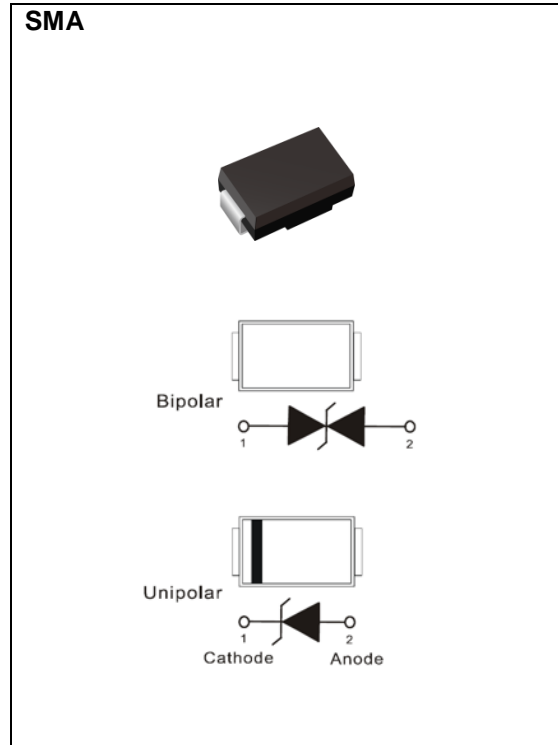
| | | | |
|----------------|-----------------|--------------|--------------|
| Voltage | 10~250 V | Power | 400 W |
|----------------|-----------------|--------------|--------------|

Features

- For surface mounted applications in order to optimize board space.
- Package suitable for automated handling
- Low inductance
- 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, SMA
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0024 ounces, 0.068 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)} | 400 | 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 | 3.3 | 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 |



P4SMA10AS ~ P4SMA250CAS 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 |
| 400W Transient Voltage Suppressor | | | | | | | | | | | |
| P4SMA10AS | P4SMA10CAS | 8.55 | 9.5 | 10.5 | 1 | 10 | 20 | 14.5 | 29 | TZU | VZF |
| P4SMA11AS | P4SMA11CAS | 9.4 | 10.5 | 11.6 | 1 | 5 | 10 | 15.6 | 27 | TZV | VZG |
| P4SMA12AS | P4SMA12CAS | 10.2 | 11.4 | 12.6 | 1 | 1 | 1 | 16.7 | 25 | TZW | VZH |
| P4SMA13AS | P4SMA13CAS | 11.1 | 12.4 | 13.7 | 1 | 1 | 1 | 18.2 | 23 | TZX | VZJ |
| P4SMA15AS | P4SMA15CAS | 12.8 | 14.3 | 15.8 | 1 | 1 | 1 | 21.2 | 20 | TZY | VZK |
| P4SMA16AS | P4SMA16CAS | 13.6 | 15.2 | 16.8 | 1 | 1 | 1 | 22.5 | 19 | TZZ | VZL |
| P4SMA18AS | P4SMA18CAS | 15.3 | 17.1 | 18.9 | 1 | 1 | 1 | 25.2 | 17 | UZA | VZM |
| P4SMA20AS | P4SMA20CAS | 17.1 | 19 | 21 | 1 | 1 | 1 | 27.7 | 15 | UZB | VZN |
| P4SMA22AS | P4SMA22CAS | 18.8 | 20.9 | 23.1 | 1 | 1 | 1 | 30.6 | 14 | UZC | VZP |
| P4SMA24AS | P4SMA24CAS | 20.5 | 22.8 | 25.2 | 1 | 1 | 1 | 33.2 | 13 | UZD | VZQ |
| P4SMA27AS | P4SMA27CAS | 23.1 | 25.7 | 28.4 | 1 | 1 | 1 | 37.5 | 11.2 | UZE | VZR |
| P4SMA30AS | P4SMA30CAS | 25.6 | 28.5 | 31.5 | 1 | 1 | 1 | 41.4 | 10 | UZF | VZS |
| P4SMA33AS | P4SMA33CAS | 28.2 | 31.4 | 34.7 | 1 | 1 | 1 | 45.7 | 9 | UZG | VZT |
| P4SMA36AS | P4SMA36CAS | 30.8 | 34.2 | 37.8 | 1 | 1 | 1 | 49.9 | 8.4 | UZH | VZU |
| P4SMA39AS | P4SMA39CAS | 33.3 | 37.1 | 41 | 1 | 1 | 1 | 53.9 | 7.8 | UZJ | VZV |
| P4SMA43AS | P4SMA43CAS | 36.8 | 40.9 | 45.2 | 1 | 1 | 1 | 59.3 | 7.1 | UZK | VZW |
| P4SMA47AS | P4SMA47CAS | 40.2 | 44.7 | 49.4 | 1 | 1 | 1 | 64.8 | 5 | UZL | VZX |
| P4SMA51AS | P4SMA51CAS | 43.6 | 48.5 | 53.6 | 1 | 1 | 1 | 70.1 | 6 | UZM | VZY |
| P4SMA56AS | P4SMA56CAS | 47.8 | 53.2 | 58.8 | 1 | 1 | 1 | 77 | 5.5 | UZN | VZZ |
| P4SMA62AS | P4SMA62CAS | 53 | 58.9 | 65.1 | 1 | 1 | 1 | 85 | 5 | UZP | WZA |
| P4SMA68AS | P4SMA68CAS | 58.1 | 64.6 | 71.4 | 1 | 1 | 1 | 92 | 4.6 | UZQ | WZB |
| P4SMA75AS | P4SMA75CAS | 64.1 | 71.3 | 78.8 | 1 | 1 | 1 | 103 | 4.1 | UZR | WZC |
| P4SMA82AS | P4SMA82CAS | 70.1 | 77.9 | 86.1 | 1 | 1 | 1 | 113 | 3.7 | UZS | WZD |
| P4SMA91AS | P4SMA91CAS | 77.8 | 86.5 | 95.5 | 1 | 1 | 1 | 125 | 3.4 | UZT | WZE |
| P4SMA100AS | P4SMA100CAS | 85.5 | 95 | 105 | 1 | 1 | 1 | 137 | 3.1 | UZU | WZF |
| P4SMA110AS | P4SMA110CAS | 94 | 105 | 116 | 1 | 1 | 1 | 152 | 2.8 | UZV | WZG |
| P4SMA120AS | P4SMA120CAS | 102 | 114 | 126 | 1 | 1 | 1 | 165 | 2.5 | UZW | WZH |
| P4SMA130AS | P4SMA130CAS | 111 | 124 | 137 | 1 | 1 | 1 | 179 | 2.3 | UZX | WZJ |
| P4SMA150AS | P4SMA150CAS | 128 | 143 | 158 | 1 | 1 | 1 | 207 | 2 | UZY | WZK |
| P4SMA160AS | P4SMA160CAS | 136 | 152 | 168 | 1 | 1 | 1 | 219 | 1.9 | UZZ | WZL |



P4SMA10AS ~ P4SMA250CAS 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 |
| 400W Transient Voltage Suppressor | | | | | | | | | | | |
| P4SMA170AS | P4SMA170CAS | 145 | 162 | 179 | 1 | 1 | 1 | 234 | 1.8 | VZA | WZM |
| P4SMA180AS | P4SMA180CAS | 154 | 171 | 189 | 1 | 1 | 1 | 246 | 1.7 | VZB | WZN |
| P4SMA200AS | P4SMA200CAS | 171 | 190 | 210 | 1 | 1 | 1 | 274 | 1.5 | VZC | WZP |
| P4SMA220AS | P4SMA220CAS | 185 | 209 | 231 | 1 | 1 | 1 | 328 | 1.2 | VZD | WZQ |
| P4SMA250AS | P4SMA250CAS | 214 | 237 | 263 | 1 | 1 | 1 | 344 | 1.2 | VZE | WZR |

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.



P4SMA10AS ~ P4SMA250CAS Series

TYPICAL CHARACTERISTIC CURVES



Fig.1 Pulse Power Rating Curve

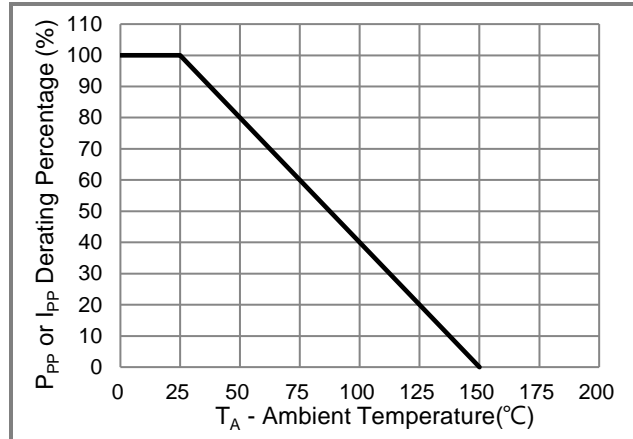


Fig.2 Derating Curve



Fig.3 10/1000us Pulse Waveform

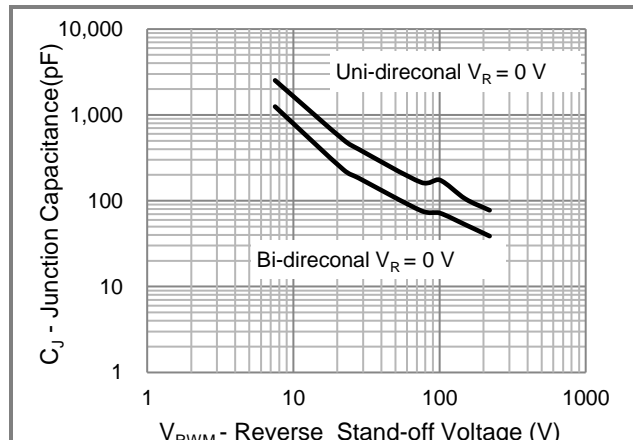


Fig.4 Typical Capacitance

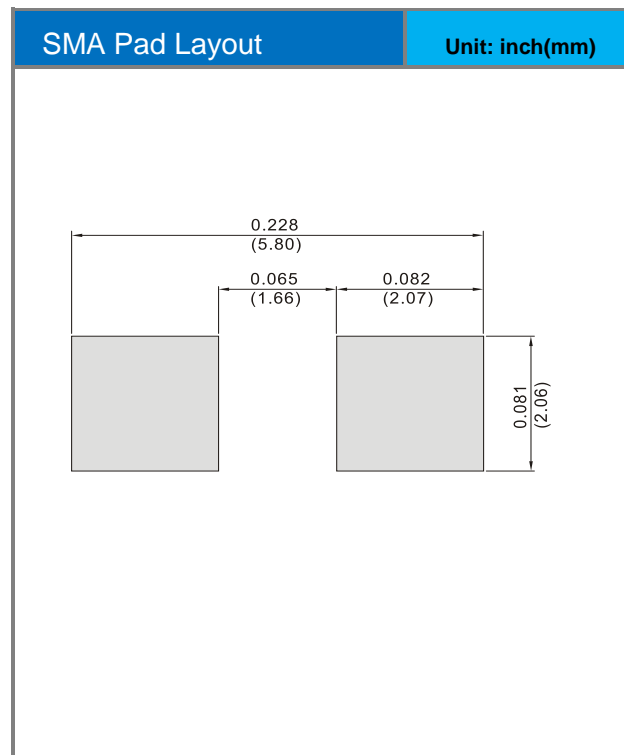
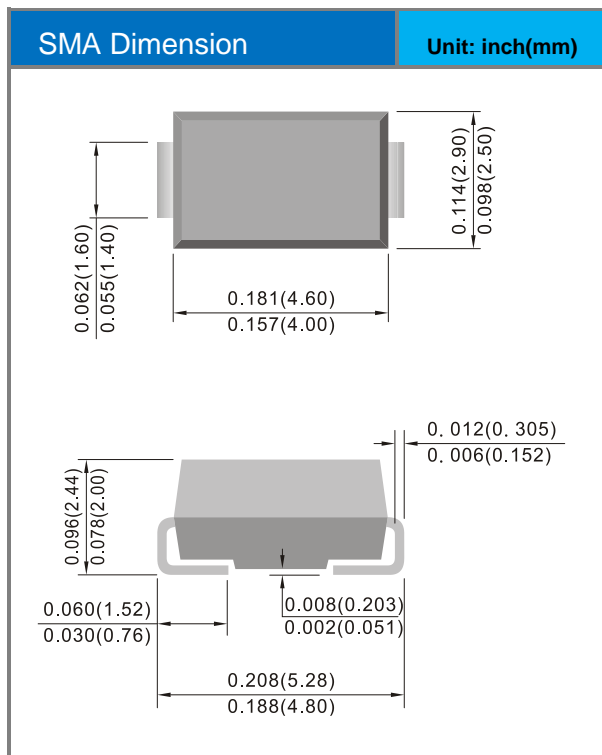


P4SMA10AS ~ P4SMA250CAS Series

Part No. Packing Code Version

| Part No. Packing Code | Package Type | Packing Type | Marking | Version |
|-----------------------|--------------|--------------------|-----------|--------------------------------|
| P4SMAxxxxAS_R1_00001 | SMA | 1.8K pcs / 7" reel | See Table | Halogen free RoHS compliant |

Packaging Information & Mounting Pad Layout





P4SMA10AS ~ P4SMA250CAS Series

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Panjit:

[P4SMA82CAS_R1_00001](#)