



Features

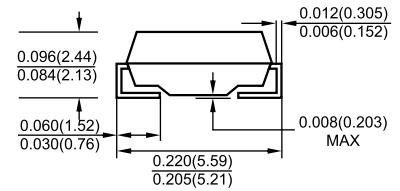
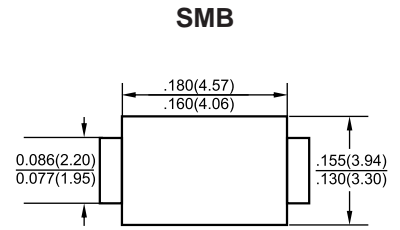
- Low switching voltage
- Low on-state voltage
- Does not degrade surge capability after multiple surge events within limit
- Fails short circuit when surged in excess of ratings
- Low Capacitance

Typical Applications

- Protect circuit

Mechanical Data

- **Package:** DO-214AA (SMB)
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

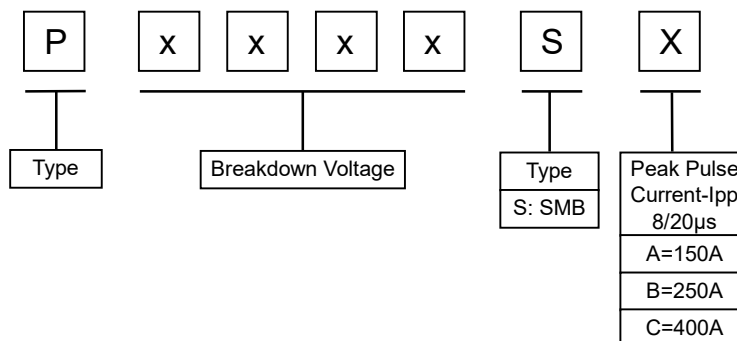


Dimensions in inches and (millimeters)

■ Maximum Ratings (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | Max |
|---|------------------|------|----------|
| Storage temperature | T _{stg} | °C | -55~+150 |
| Junction temperature | T _j | °C | -55~+150 |
| Thermal resistance(Junction to Ambient) | R _{θJA} | °C | 100 |
| Thermal resistance(Junction to Lead) | R _{θJL} | °C | 20 |

Part Number Code





Electrical Characteristics

| Part Number | V_{DRM} (V) | V_S (V) | V_T (V) | I_{DRM} (μ A) | I_S (mA) | I_T (A) | I_H (mA) | C_O (pF) | Marking |
|-------------|---------------|-----------|-----------|----------------------|------------|-----------|------------|------------|---------|
| P0080SA | 6 | 25 | 4 | 5 | 800 | 2.2 | 50 | 45 | P008A |
| P0080SB | 6 | 25 | 4 | 5 | 800 | 2.2 | 50 | 60 | P008B |
| P0080SC | 6 | 25 | 4 | 5 | 800 | 2.2 | 50 | 75 | P008C |
| P0300SA | 25 | 40 | 4 | 5 | 800 | 2.2 | 50 | 45 | P03A |
| P0300SB | 25 | 40 | 4 | 5 | 800 | 2.2 | 50 | 65 | P03B |
| P0300SC | 25 | 40 | 4 | 5 | 800 | 2.2 | 50 | 75 | P03C |
| P0640SA | 58 | 77 | 4 | 5 | 800 | 2.2 | 150 | 35 | P06A |
| P0640SB | 58 | 77 | 4 | 5 | 800 | 2.2 | 150 | 45 | P06B |
| P0640SC | 58 | 77 | 4 | 5 | 800 | 2.2 | 150 | 55 | P06C |
| P0720SA | 65 | 88 | 4 | 5 | 800 | 2.2 | 150 | 50 | P07A |
| P0720SB | 65 | 88 | 4 | 5 | 800 | 2.2 | 150 | 45 | P07B |
| P0720SC | 65 | 88 | 4 | 5 | 800 | 2.2 | 150 | 60 | P07C |
| P0900SA | 75 | 98 | 4 | 5 | 800 | 2.2 | 150 | 40 | P09A |
| P0900SB | 75 | 98 | 4 | 5 | 800 | 2.2 | 150 | 40 | P09B |
| P0900SC | 75 | 98 | 4 | 5 | 800 | 2.2 | 150 | 65 | P09C |
| P1100SA | 90 | 130 | 4 | 5 | 800 | 2.2 | 150 | 35 | P11A |
| P1100SB | 90 | 130 | 4 | 5 | 800 | 2.2 | 150 | 40 | P11B |
| P1100SC | 90 | 130 | 4 | 5 | 800 | 2.2 | 150 | 55 | P11C |
| P1300SA | 120 | 160 | 4 | 5 | 800 | 2.2 | 150 | 35 | P13A |
| P1300SB | 120 | 160 | 4 | 5 | 800 | 2.2 | 150 | 40 | P13B |
| P1300SC | 120 | 160 | 4 | 5 | 800 | 2.2 | 150 | 90 | P13C |
| P1500SA | 140 | 180 | 4 | 5 | 800 | 2.2 | 150 | 40 | P15A |
| P1500SB | 140 | 180 | 4 | 5 | 800 | 2.2 | 150 | 35 | P15B |
| P1500SC | 140 | 180 | 4 | 5 | 800 | 2.2 | 150 | 50 | P15C |
| P1800SA | 170 | 220 | 4 | 5 | 800 | 2.2 | 150 | 40 | P18A |
| P1800SB | 170 | 220 | 4 | 5 | 800 | 2.2 | 150 | 65 | P18B |
| P1800SC | 170 | 220 | 4 | 5 | 800 | 2.2 | 150 | 55 | P18C |
| P2000SA | 180 | 220 | 4 | 5 | 800 | 2.2 | 150 | 40 | P20A |



| Part Number | V _{DRM} (V) | V _S (V) | V _T (V) | I _{DRM} (μA) | I _S (mA) | I _T (A) | I _H (mA) | C _O (pF) | Marking |
|-------------|----------------------|--------------------|--------------------|-----------------------|---------------------|--------------------|---------------------|---------------------|---------|
| P2000SB | 180 | 220 | 4 | 5 | 800 | 2.2 | 150 | 60 | P20B |
| P2000SC | 180 | 220 | 4 | 5 | 800 | 2.2 | 150 | 85 | P20C |
| P2300SA | 190 | 260 | 4 | 5 | 800 | 2.2 | 150 | 45 | P23A |
| P2300SB | 190 | 260 | 4 | 5 | 800 | 2.2 | 150 | 60 | P23B |
| P2300SC | 190 | 260 | 4 | 5 | 800 | 2.2 | 150 | 65 | P23C |
| P2600SA | 220 | 300 | 4 | 5 | 800 | 2.2 | 150 | 35 | P26A |
| P2600SB | 220 | 300 | 4 | 5 | 800 | 2.2 | 150 | 45 | P26B |
| P2600SC | 220 | 300 | 4 | 5 | 800 | 2.2 | 150 | 65 | P26C |
| P3100SA | 275 | 350 | 4 | 5 | 800 | 2.2 | 150 | 35 | P31A |
| P3100SB | 275 | 350 | 4 | 5 | 800 | 2.2 | 150 | 45 | P31B |
| P3100SC | 275 | 350 | 4 | 5 | 800 | 2.2 | 150 | 55 | P31C |
| P3500SA | 320 | 400 | 4 | 5 | 800 | 2.2 | 150 | 30 | P35A |
| P3500SB | 320 | 400 | 4 | 5 | 800 | 2.2 | 150 | 40 | P35B |
| P3500SC | 320 | 400 | 4 | 5 | 800 | 2.2 | 150 | 50 | P35C |
| P4000SA | 360 | 460 | 4 | 5 | 800 | 2.2 | 150 | 20 | P40A |
| P4000SB | 360 | 460 | 4 | 5 | 800 | 2.2 | 150 | 40 | P40B |
| P4000SC | 360 | 460 | 4 | 5 | 800 | 2.2 | 150 | 45 | P40C |
| P4500SA | 400 | 540 | 4 | 5 | 800 | 2.2 | 150 | 20 | P45A |
| P4500SB | 400 | 540 | 4 | 5 | 800 | 2.2 | 150 | 40 | P45B |
| P4500SC | 400 | 540 | 4 | 5 | 800 | 2.2 | 150 | 45 | P45C |
| P5000SA | 440 | 600 | 4 | 5 | 800 | 2.2 | 150 | 20 | P50A |
| P5000SB | 440 | 600 | 4 | 5 | 800 | 2.2 | 150 | 40 | P50B |
| P5000SC | 440 | 600 | 4 | 5 | 800 | 2.2 | 150 | 45 | P50C |

Notes:

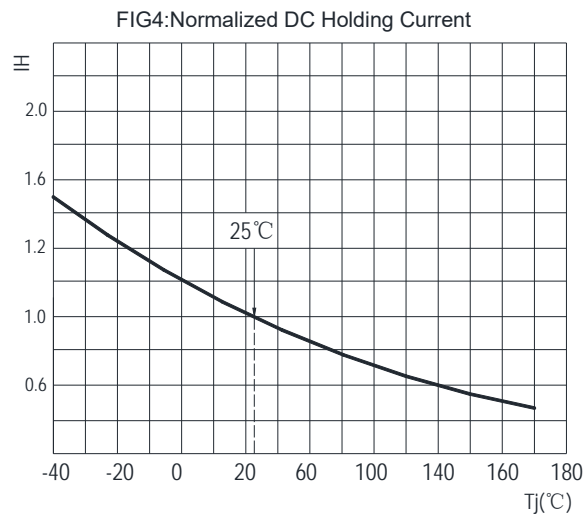
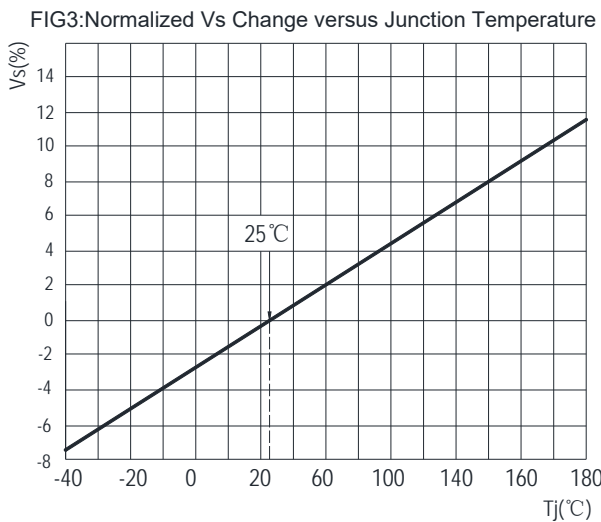
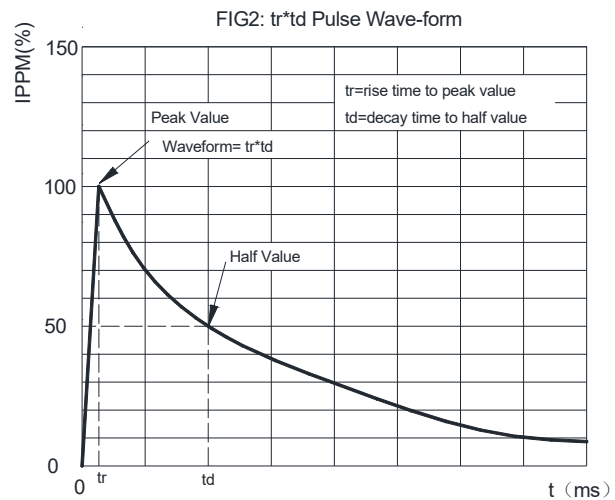
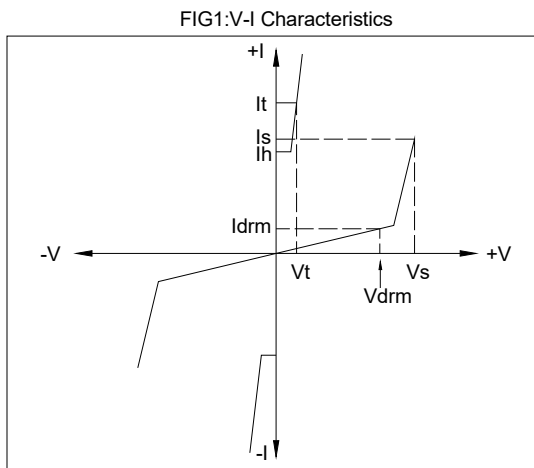
- All measurements are made at an ambient temperature of 25°C. I_{PP} applies to -40°C through +85°C temperature range.
- Off-state capacitance(C_O) is measured at 1 MHz with a 2V bias and is typical value.
- For surge ratings, see table below.



For individual “SA”, “SB”, and “SC” surge ratings, see table below.

| Series | Ipp 2/10us (A) | Ipp 8/20us (A) | Ipp 10/160us (A) | Ipp 10/560us (A) | Ipp 10/1000us (A) | ITSM 60Hz (A) | di/dt (A/μS) |
|--------|----------------------|----------------------|------------------------|------------------------|-------------------------|---------------------|-----------------|
| | Min | Min | Min | Min | Min | Min | Min |
| A | 150 | 150 | 90 | 50 | 45 | 20 | 500 |
| B | 250 | 250 | 150 | 100 | 80 | 30 | 500 |
| C | 500 | 400 | 200 | 150 | 100 | 50 | 500 |

■ Characteristics (Typical)

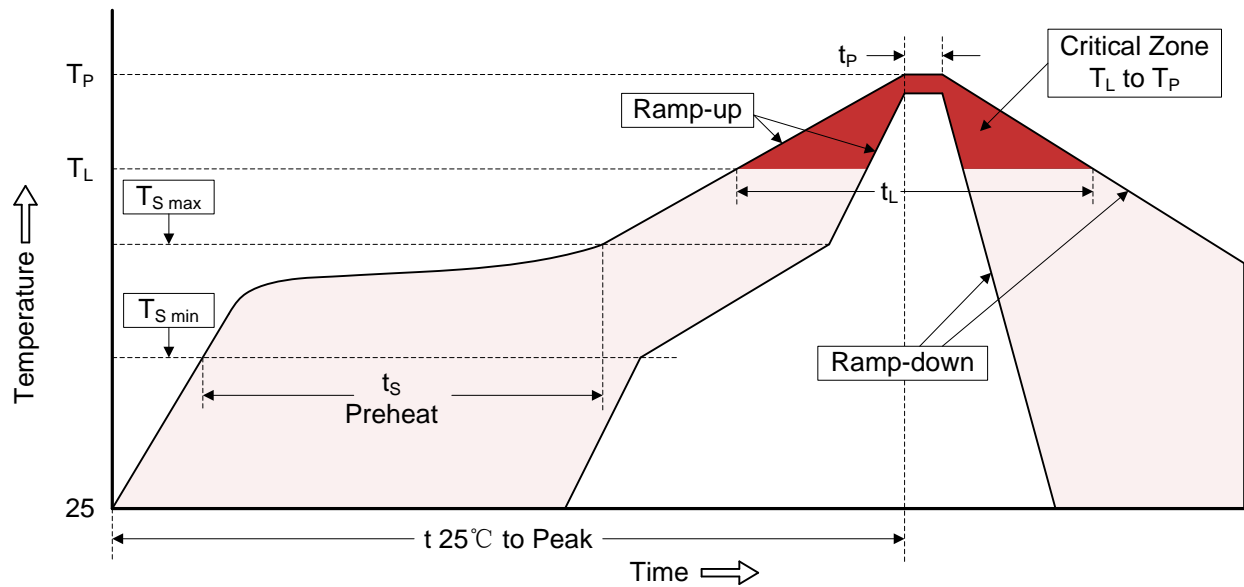


■ Ordering Information (Example)

| PREFERED P/N | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------------|----------------------|-------------------------|----------------------------|---------------|
| P0080S-P4000S | Approximate 0.0975 | 3000 | 6000 | 48000 | 13" reel |

Recommended Soldering Conditions

Reflow Soldering

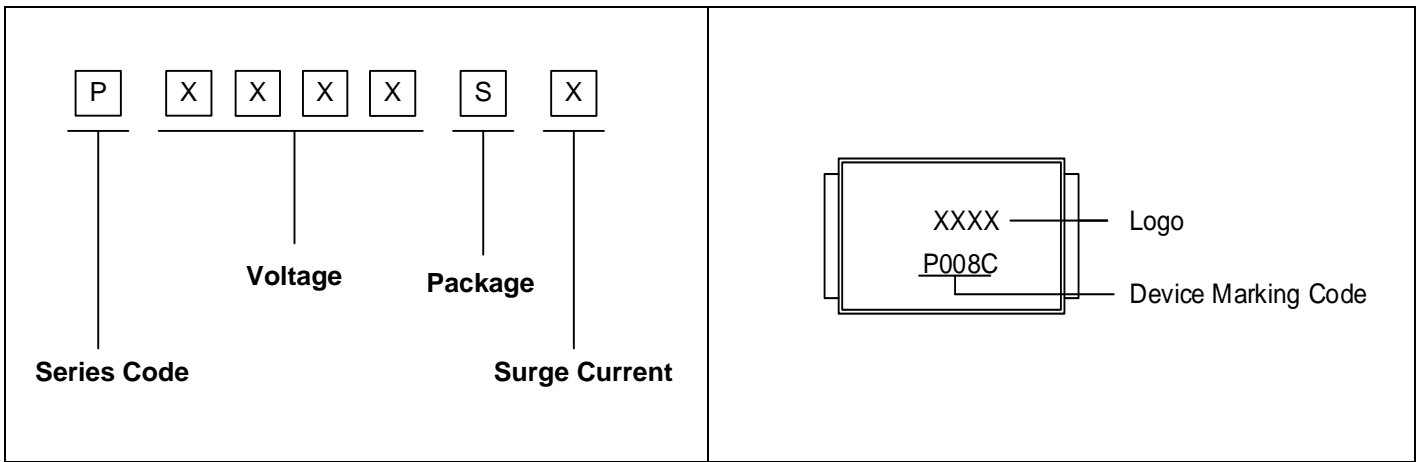


Recommended Conditions

| Profile Feature | Pb-Free Assembly |
|---|----------------------------------|
| Average ramp-up rate (T_L to T_P) | 3°C/second max. |
| Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_s) | 150°C 200°C 60-180 seconds |
| $T_{S\ max}$ to T_L -Ramp-up Rate | 3°C/second max. |
| Time maintained above: -Temperature (T_L) -Time (t_L) | 217°C 60-150 seconds |
| Peak Temperature (T_P) | 260°C |
| Time within 5°C of actual Peak Temperature (t_p) | 20-40 seconds |
| Ramp-down Rate | 6°C/second max. |
| Time 25°C to Peak Temperature | 8 minutes max. |



Part Number Code and Marking



Packaging

| Tape | | Symbol | Dimension (mm) | | |
|-------------------|----------|-----------|----------------|----|------------|
| | | W | 12.00±0.30 | | |
| | | P0 | 4.00±0.10 | | |
| | | P1 | 8.00±0.10 | | |
| | | P2 | 2.00±0.10 | | |
| | | D0 | Φ1.55±0.05 | | |
| | | D1 | Φ1.55±0.05 | | |
| | | E | 1.75±0.10 | | |
| | | F | 5.50±0.10 | | |
| | | A0 | 3.76±0.10 | | |
| | | B0 | 5.69±0.10 | | |
| | | K0 | 2.70±0.10 | | |
| | | T | 0.25±0.10 | | |
| | | 13 " Reel | | D2 | Φ330.0±2.0 |
| | | | | D3 | Φ13.5±0.5 |
| H | 2.5±0.5 | | | | |
| W1 | 16.0±1.0 | | | | |
| Quantity: 3000PCS | | | | | |