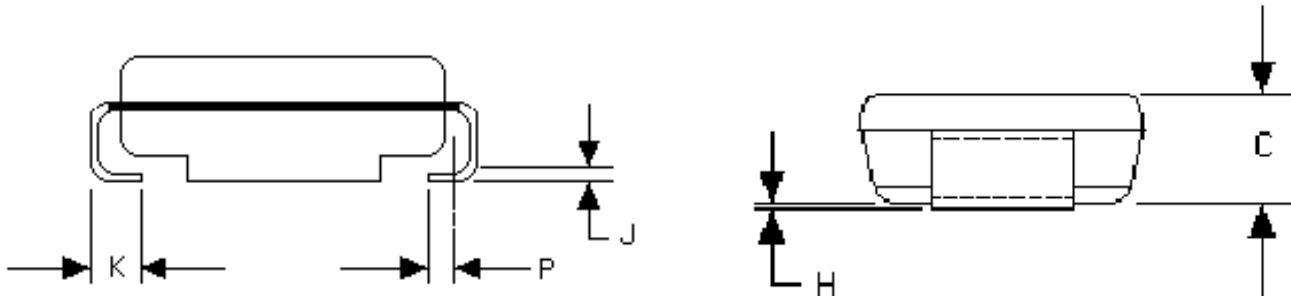
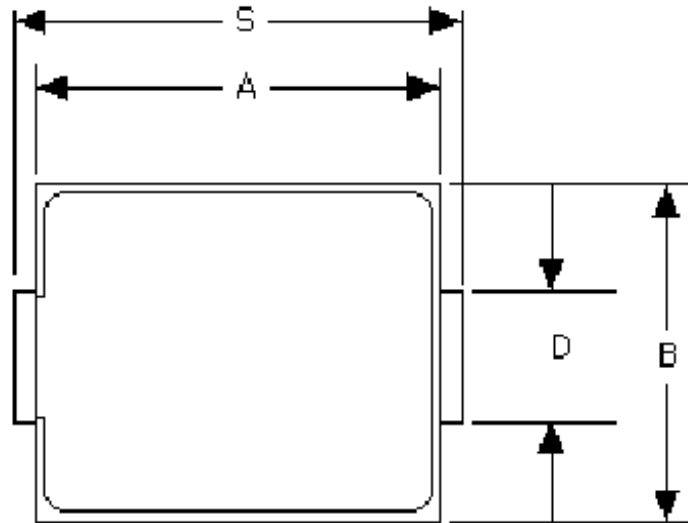


Specification Status: RELEASED

PHYSICAL DESCRIPTION



| | A | | B | | C | | D* | | H | | J | | K | | P | S | |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | | REF | MIN |
| mm: | 4.06 | 4.57 | 3.30 | 3.81 | 1.90 | 2.41 | 1.96 | 2.11 | .051 | .152 | 0.15 | 0.30 | 0.76 | 1.27 | 0.51 | 5.21 | 5.59 |
| in: | .160 | .180 | .130 | .150 | .075 | .095 | .077 | .083 | .002 | .006 | .006 | .012 | .030 | .050 | .020 | .205 | .220 |

* D DIMENSION SHALL BE MEASURED WITHIN DIMENSION P

Other Physical Characteristics

- Form Factor: SMB (Surface Mount DO-214 Package)
- Lead Material: Tin/lead finish
- Encapsulation Material: Epoxy, meets UL94 V-0 requirements
- Solderability: per MIL-STD-750, Method 2026
- Solder Heat Withstand: per MIL-STD-750, Method 2031
- Solvent Resistance: per MIL-STD-750, Method 1022
- Mechanical Shock: per MIL-STD-750, Method 2016

Tape and Reel packaging per EIA 481-1

DEVICE RATINGS @ 25° C (Both Polarities)

| Parameter | Symbol | Value | Units |
|------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------|------------|
| Off-State Voltage, Maximum at $I_D = 5 \mu A$ | VDM | 170 | V |
| Non-Repetitive Peak Impulse Current Double exponential waveform (Notes 1 and 2) | $10 \times 1000 \mu sec$ | IPP ₁ | 50 A |
| | $10/560 \mu sec$ | IPP ₂ | 70 A |
| | $10/160 \mu sec$ | IPP ₃ | 100 A |
| Critical Rate of Rise of On-State Current Maximum $2 \times 10 \mu sec$ waveform, $V_{OC} = 2.5kV$, $I_{SC} = 500A$ peak | di/dt | 150 | A/ μs |

DEVICE THERMAL RATINGS

| | | | |
|-----------------------------------------------------------------|------|------------|----|
| Storage Temperature Range | TSTG | -65 to 150 | °C |
| Operating Temperature Range Blocking or conducting state | TA | -40 to 125 | °C |
| Overload Junction Temperature Maximum; Conducting state only | TJ | +175 | °C |

ELECTRICAL CHARACTERISTICS Both polarities (T_J @ 25°C unless otherwise noted)

| Characteristics | Symbol | Min | Typ | Max | Units |
|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------|-------|-------|------------|
| Breakover Voltage (+25°C) $dV/dt = 100V/\mu sec$, $I_{SC} = 1.0A$, $V_{DC} = 1000V$ | VBO | ---- | 230 | 265 | V |
| Breakover Voltage (+25°C) $f = 60Hz$, $I_{SC} = 1.0A_{rms}$, $V_{OC} = 1000V_{rms}$, $R = 1.0 k\Omega$, $t = 0.5$ cycle (Note 2) | VBO | ---- | 230 | 265 | V |
| Breakover Voltage Temperature Coefficient | dVBO/dT _J | ---- | 0.08 | ----- | %/°C |
| Off-State Current (V _{D1} = 50V) (V _{D2} = VDM) | ID1 | ---- | ----- | 2.0 | μA |
| | ID2 | ---- | ----- | 5.0 | μA |
| On-State Voltage (I _T = 1A) $PW \leq 300 \mu sec$, Duty Cycle $\leq 2\%$ (Note 2) | VT | ---- | ----- | 5.0 | V |
| Breakover Current | IBO | ---- | 230 | ----- | mA |
| Holding Current (Note 2) | IH | 175 | 350 | ---- | mA |
| Critical Rate of Rise of Off-State Voltage (Linear waveform, $V_D = 0.8 \times$ Rated V_{BO} , $T_J = +25^\circ C$) | dv/dt | 2000 | ---- | ----- | V/ μs |
| Capacitance (f = 1.0 Mhz, 50V _{DC} bias, 1 V _{rms}) (f = 1.0 Mhz, 2V _{DC} bias, 15mV _{rms}) | C1 | ---- | 20 | ---- | pF |
| | C2 | ---- | 50 | ---- | pF |

Note 1. Allow cooling before test second polarity

Note 2. Measured under pulse conditions to reduce heating

VOLTAGE-CURRENT CHARACTERISTIC

