



8700 E. Thomas Road
 Scottsdale, AZ 85251
 Tel: (480) 941-6300
 Fax: (480) 947-1503

DESCRIPTION

SMBJ surface mount package is utilized where power and space is a requirement. Designed for effective protection of power bus lines from voltage spikes originating from ESD, line noise (EFT), and induced lightning defined by IEC 1000-4-2, 1000-4-4, and 1000-4-5 respectively. Advanced technology provides lowest clamping voltage with surface mount packaging minimizing parasitic inductance.

FEATURES

- 2000 watts Peak Pulse Power 8/20 μ s
- For surface Mount Applications (flat handling surface for accurate placement).
- Voltage and reverse leakage lowest available
- High surge capacity provides transient protection for low voltage circuits
- UL 94V-0 Flammability Classification

MECHANICAL CHARACTERISTICS

- CASE: DO-214AA (SMBJ) outline
- Terminals solderable per MIL-STD-750, Method 2026
- Maximum temperature for soldering: 260°C for 10 seconds maximum
- LEAD MATERIAL: Copper
- LEAD FINISH: Tin plate
- POLARITY: Cathode end is banded
- WEIGHT: 0.2 grams
- MOUNTING POSITION: Any

MAXIMUM RATINGS

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Steady state Power Dissipation: 3.0 watt @ $T_L \leq 75^\circ\text{C}$
- Repetition rate (duty cycle): .01%
- Surge Power: 300 watts @ 10/1000 μ s or 2000 watts @ 8/20 μ s
- I_{PP} and V_C below are @ 8/20 μ s

Electrical Characteristics @ 25°C unless otherwise specified

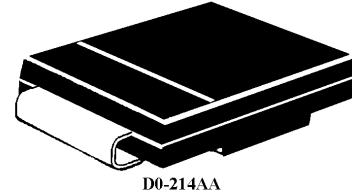
| TYPE SMBJ | $V_{(BR)}$ MIN VOLTS | $I_{(BR)}$ mA | V_{WM} VOLTS | I_P μ A | I_{PP} A | V_C VOLTS | $\alpha_{V(BR)}$ %/°C |
|--------------|----------------------------|------------------|-------------------|------------------|---------------|----------------|--------------------------|
| 2K3.0 | 4.3 | 50 | 3.0 | 1500 | 10 | 5.4 | +0/-0.05 |
| 2K3.3 | 4.6 | 50 | 3.3 | 700 | 10 | 5.8 | \pm .025 |
| 2K4.0 | 5.0 | 50 | 4.0 | 400 | 10 | 6.3 | \pm .030 |
| 2K4.5 | 5.4 | 50 | 4.5 | 50 | 10 | 6.6 | \pm .040 |
| 2K5.0 | 5.9 | 50 | 5.0 | 5 | 10 | 7.6 | \pm .050 |

SMBJ2K3.0

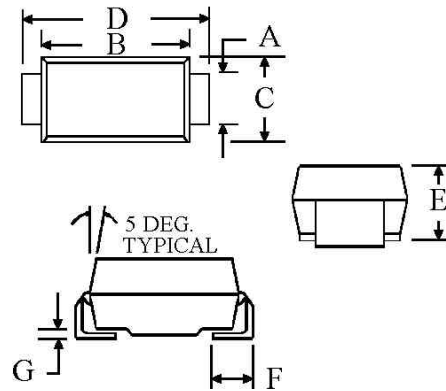
thru

SMBJ2K5.0

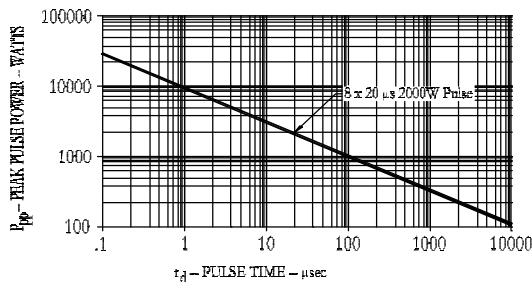
TRANSIENT VOLTAGE SUPPRESSOR



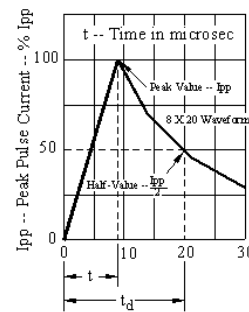
DO-214AA



| DIMENSIONS IN INCHES | | | | | | | |
|---------------------------|------|------|------|------|------|-------|------|
| | A | B | C | D | E | F | G |
| MIN | .077 | .160 | .130 | .205 | .075 | .030 | .004 |
| MAX | .083 | .180 | .155 | .220 | .095 | .060 | .008 |
| DIMENSIONS IN MILLIMETERS | | | | | | | |
| | A | B | C | D | E | F | G |
| MIN | 1.96 | 4.06 | 3.30 | 5.21 | 1.90 | 0.760 | .101 |
| MAX | 2.10 | 4.57 | 3.94 | 5.59 | 2.41 | 1.520 | .202 |



Peak Pulse Power vs. Pulse Time



8X20 Pulse Wave Form

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www.DatasheetCatalog.com

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