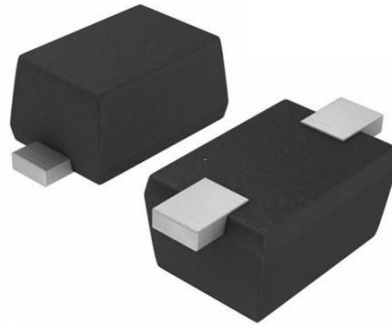


Features

- 60Watts peak pulse power ($t_p = 8/20\mu s$)
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 25kV$ contact $\pm 25kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 8A (8/20 μs)



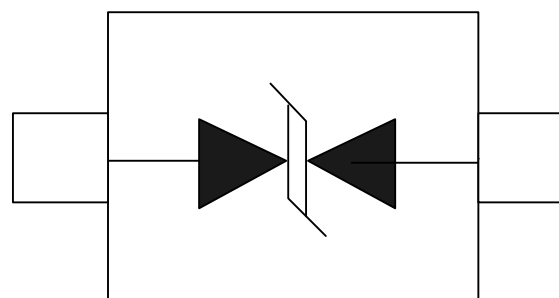
Applications

- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Pagers Peripherals

Mechanical Data

- SOD923 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Schematic & PIN Configuration



SOD-923



Absolute Maximum Rating

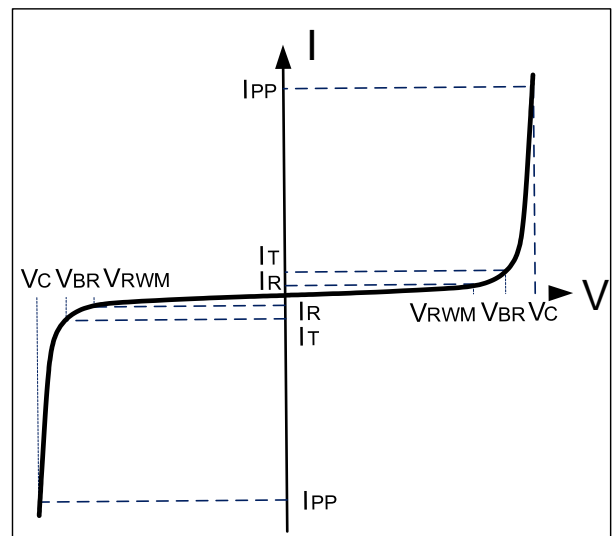
| Rating | Symbol | Value | Units |
|--|-----------|----------------|-------|
| Peak Pulse Power ($t_p = 8/20\mu s$) | P_{PP} | 60 | Watts |
| Peak Pulse Current ($t_p = 8/20\mu s$) (note1) | I_{pp} | 8 | A |
| ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact) | V_{ESD} | 25 25 | kV |
| Lead Soldering Temperature | T_L | 260(10seconds) | °C |
| Junction Temperature | T_J | -55 to + 150 | °C |
| Storage Temperature | T_{stg} | -55 to + 150 | °C |

Electrical Characteristics

| Parameter | Symbol | Conditions | Min | Typical | Max | Units |
|---------------------------|-----------|--------------------------------|-----|---------|-----|-------|
| Reverse Stand-Off Voltage | V_{RWM} | | | | 5.0 | V |
| Reverse Breakdown Voltage | V_{BR} | $I_T = 1mA$ | 5.5 | | | V |
| Reverse Leakage Current | I_R | $V_{RWM} = 5V, T = 25^\circ C$ | | | 0.5 | uA |
| Clamping Voltage | V_C | $I_{PP} = 8A, t_p = 8/20\mu s$ | | | 8 | V |
| Junction Capacitance | C_j | $V_R = 0V, f = 1MHz$ | | 13 | 15 | pF |

Electrical Parameters (TA = 25°C unless otherwise noted)

| Symbol | Parameter |
|-----------|---|
| I_{PP} | Maximum Reverse Peak Pulse Current |
| V_C | Clamping Voltage @ I_{PP} |
| V_{RWM} | Working Peak Reverse Voltage |
| I_R | Maximum Reverse Leakage Current @ V_{RWM} |
| V_{BR} | Breakdown Voltage @ I_T |
| I_T | Test Current |
| | |
| | |



Note: 8/20μs pulse waveform.



Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

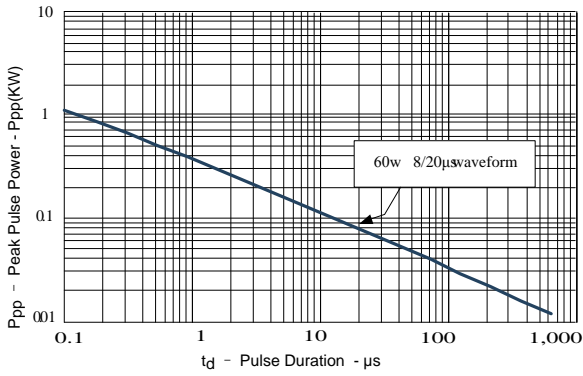


Figure 2: Power Derating Curve

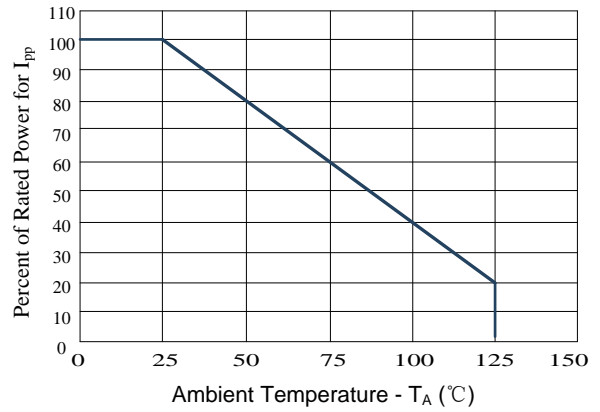


Figure3: Pulse Waveform

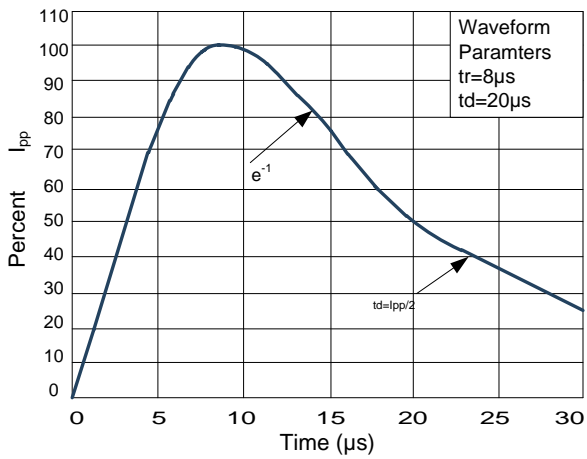
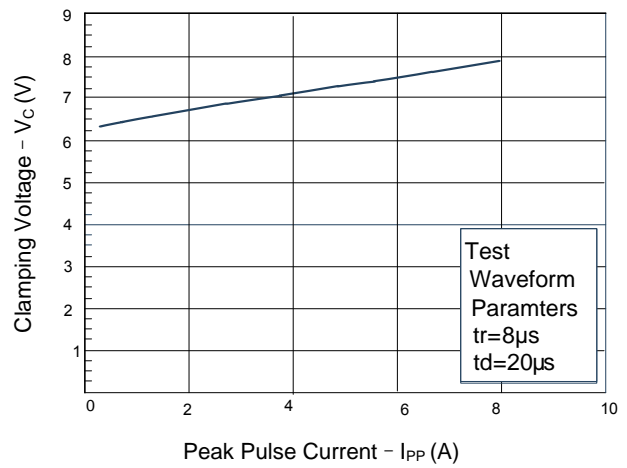
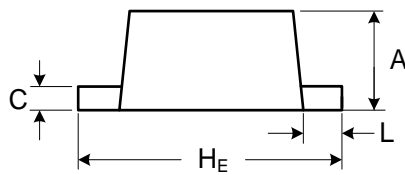
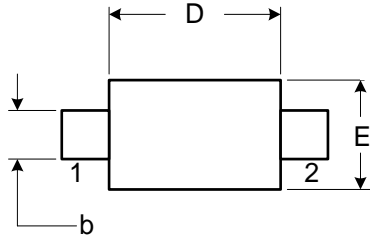


Figure 4: Clamping Voltage vs.Ipp





Outline Drawing – SOD923



DIMENSIONS

| SYMBOL | MILLIMETER | | INCHES | |
|----------------|------------|------|--------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.42 | 0.45 | 0.017 | 0.018 |
| b | 0.20 | 0.30 | 0.008 | 0.012 |
| C | 0.12 | 0.25 | 0.0048 | 0.01 |
| D | 0.80 | 1.00 | 0.032 | 0.04 |
| E | 0.60 | 0.80 | 0.024 | 0.032 |
| H _E | 1.00 | 1.20 | 0.04 | 0.048 |
| L | 0.10 | 0.20 | 0.004 | 0.008 |

Ordering information

| Order code | Package | Base qty | Delivery mode |
|-----------------|---------|----------|---------------|
| RHTVSBC0521D9-S | SOD923 | 8000 | Tape and reel |