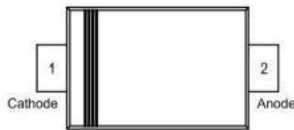




Simplified outline



Graphic symbol



General description

Unidirectional ElectroStatic Discharge (ESD) protection diode in a SOD523 plastic package designed to protect one transmission or data line from the damage caused by ESD and other transients

Features and benefits

- Unidirectional ESD protection of one line
- Reverse stand-off voltage: 36V Max
- Low leakage current: nA Level
- Response time is typically < 1 ns
- Low clamping voltage: $V_c < 65V @ I_{pp} = 7.0 A$
- ESD Protection: 30kV (air) / 30kV (contact) (IEC 61000-4-2)
- Surge Protection: 7.0 A (IEC 61000-4-58/20 μ s)

Application information

- Cellular phones
 - Portable devices
- Digital cameras
- Power supplies

Ordering information

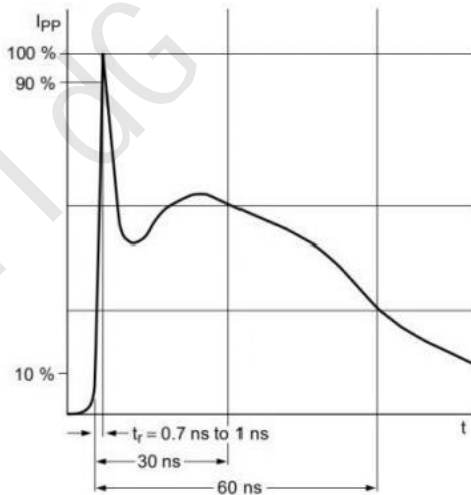
| Device | Package | Marking | Packaging |
|---------|---------|---------|------------------|
| ESD5Z36 | SOD523 | 36E | 3000/Tape & Reel |

Maximum Ratings (Top=25 C,unless otherwise specified)

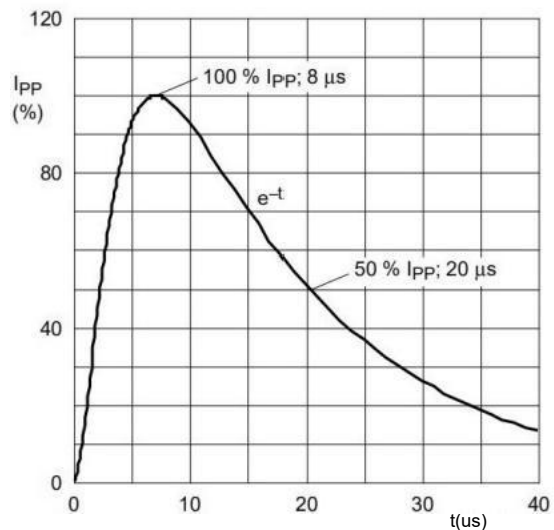
| Parameter | Symbol | Value | Unit |
|---|--------|-------------|------|
| Peak Pulse Power (tp=8/20 μ s) | PppM | 450 | W |
| Peak Pulse Current (tp=8/20 μ s) | Ippm | 7.0 | A |
| Maximum lead temperature for soldering during 10s | TL | 260 | ° C |
| Storage Temperature Range | Tstg | -55 to +150 | ° C |
| Operating Temperature Range | Top | -40 to +125 | ° C |
| Maximum junction temperature | Tj | 150 | ° C |
| ESD voltage IEC 61000-4-2 (air discharge) | VESD | 30 | kV |
| ESD voltage IEC 61000-4-2 (contact discharge) | VESD | 30 | kV |

Electrical Characteristics (Top=25°C,unless otherwise specified)

| Parameter | Symbo | Min | Typ | Max | Unit | Condition |
|-----------------------------------|----------------|------|-----|------|------|---|
| Reverse Working Voltage | VRWM | | | 36.0 | V | |
| Breakdown Voltage | VBR | 38.5 | | | V | I _r =1mA |
| Leakage Current I _{Leak} | I _R | | | 100 | nA | VR _{wM} =36V |
| Clamping Voltage | V _c | | | 65.0 | V | I _{pp} =7.0A, T _p =8/20 μ s |
| Junction Capacitance | C _J | | | 40 | pF | VR=0V, f=1MHz |



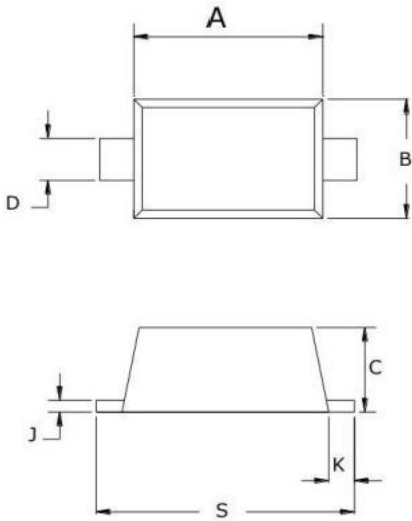
IEC61000-4-2 Waveform



IEC 61000-4-5 Waveform(8/20μs pulse)

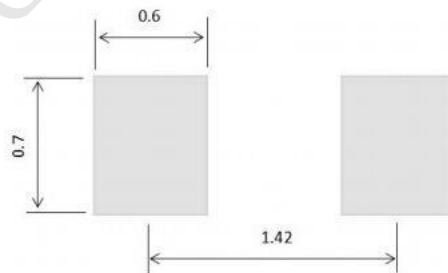
Package Outline Dimensions

SOD523



| SYMBOL | MILLIMETERS | | |
|--------|-------------|------|------|
| | MIN | NOR | MAX |
| A | 1.10 | 1.20 | 1.30 |
| B | 0.70 | 0.80 | 0.90 |
| C | 0.60 | 0.65 | 0.70 |
| D | 0.25 | 0.30 | 0.35 |
| J | 0.08 | 0.11 | 0.15 |
| K | 0.15 | 0.20 | 0.25 |
| S | 1.50 | 1.60 | 1.70 |

Soldering Footprint (mm)



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[SMBJ33CATR](#) [SMBJ6.5A](#) [SMBJ8.0A](#) [ESD101-B1-02ELS E6327](#) [ESD112-B1-02EL E6327](#) [ESD7451N2T5G](#) [19180-510](#) [CPDT-5V0USP-](#)
[HF](#) [3.0SMCJ33CA-F](#) [3.0SMCJ36A-F](#) [HSPC16701B02TP](#) [JANTX1N6126A](#) [D3V3Q1B2DLP3-7](#) [D55V0M1B2WS-7](#) [SCM1293A-04SO](#)
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[P6KE13CA](#) [P6KE43CA](#) [P6KE6.8CA](#) [P6KE8.2](#) [P6SMBJ20CA](#) [JANTX1N6072A](#) [SR2835ESKG](#) [SA90CA](#)