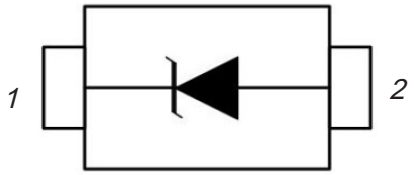
# SD03 THRU SD36

Unidirectional TVS Diodes

## FEATURES

- IEC61000-4-2 (ESD) ±15kV (air), ±8kV
- (contact)
- IEC61000-4-4 (EFT) 40A (5/50ηs)
- 350 Watts Peak Pulse Power per (tp=8/20μs)
- Protects one I/O line (unidirectional)
- Low clamping voltage
- Working voltages : 3.3V to 36V
  Low leakage current




**SOD-323**

## MACHANICAL DATA

- SOD-323 package
- Packaging: Tape and Reel
- High temperature soldering guaranted: 260℃/10s

## APPLICATIONS

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Networking and Telecom
- Serial and Parallel Ports
- Peripherals

## ABSOLUTE MAXIMUM RATING

| Symbol | Parameter | Value | Units |
|---|---|---|---|
| $V_{ESD}$ | ESD per IEC 61000-4-2 (Air)<br>ESD per IEC 61000-4-2 (Contact) | ±15<br>±8 | kV |
| $P_{PP}$ | Peak Pulse Power (8/20μs) | 350 | W |
| $T_{OPT}$ | Operating Temperature | -55/+150 | °C |
| $T_{STG}$ | Storage Temperature | -55/+150 | °C |
| $T_L$ | Lead Soldering Temperature | 260 (10 sec.) | °C |

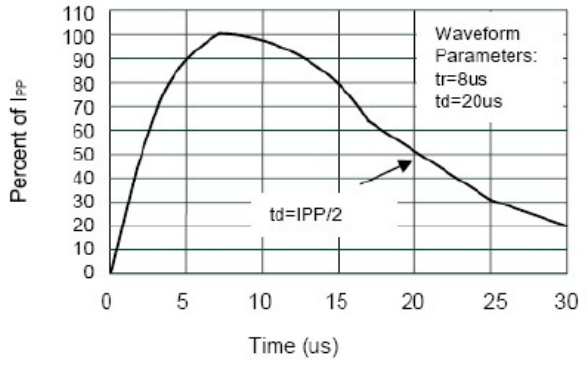


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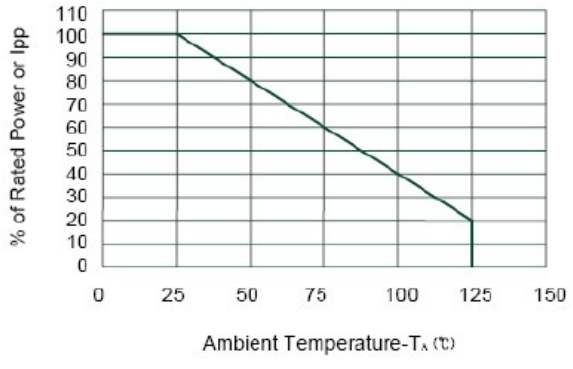
## ELECTRICAL CHARACTERISTICS (Tamb=25°C)

| PART NUMBER | DEVICE MARKING | $V_{RWM}$ (V) (max.) | $V_B$ (V) (min.) | $I_T$ (mA) | $V_C$@1A (V) (max.) | $V_C$ (V) (max.) | (@A) | $I_R$ (μA) (max.) | $C_T$ (pF) (max.) |
|---|---|---|---|---|---|---|---|---|---|
| SD03 | 03W | 3.3 | 4 | 1 | 6.5 | 10.5 | 20 | 40 | 450 |
| SD05 | 05W | 5 | 6 | 1 | 9.8 | 18 | 17 | 10 | 300 |
| SD12 | 12W | 12 | 13.3 | 1 | 19 | 32 | 11 | 1 | 130 |
| SD15 | 15W | 15 | 16.7 | 1 | 24 | 38 | 10 | 1 | 120 |
| SD18 | 18W | 18 | 20.0 | 1 | 29 | 45 | 9 | 1 | 100 |
| SD20 | 20W | 20 | 22.3 | 1 | 35 | 50 | 8 | 1 | 90 |
| SD24 | 24W | 24 | 26.7 | 1 | 43 | 52 | 7 | 1 | 80 |
| SD36 | 36W | 36 | 40 | 1 | 60 | 75 | 5 | 1 | 60 |

## ELECTRICAL CHARACTERISTICS CURVE




Pulse Waveform

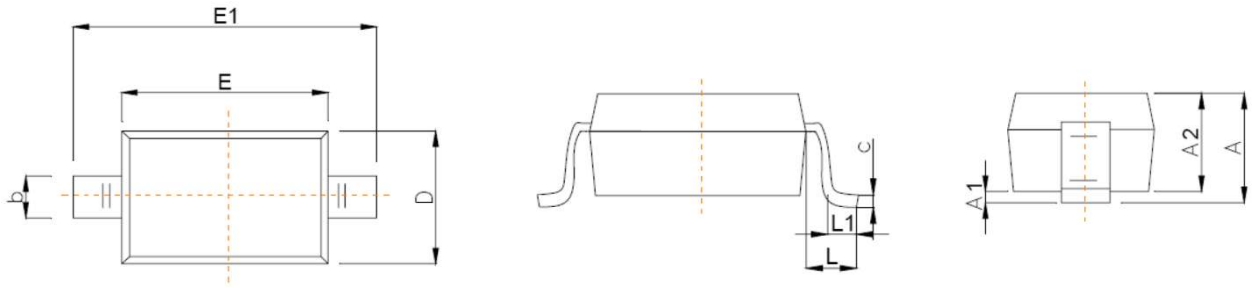



Power Derating Curve

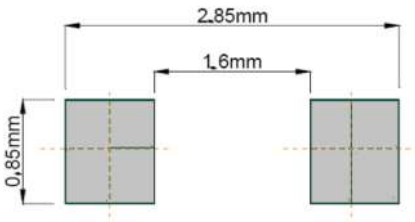


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## SOD-323 PACKAGE OUTLINE DIMENSIONS




| Symbol | Dimensions In Millimeters | |
|---|---|---|
| | Min | Max |
| A | | 1.00 |
| A1 | 0.000 | 0.100 |
| A2 | 0.800 | 0.900 |
| b | 0.250 | 0.350 |
| c | 0.080 | 0.150 |
| D | 1.200 | 1.400 |
| E | 1.600 | 1.800 |
| E1 | 2.500 | 2.700 |
| e | 1.800 | 2.040 |
| L | 0.475 REF | |
| L1 | 0.250 | 0.400 |
| θ | 0° | 8° |




**Recommended Pad outline**



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