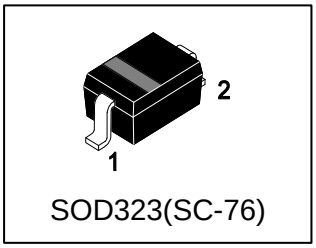
# LTVS32H24CT1G

1 Lines, Bi-directional TVS Diode



SOD323(SC-76)


## 1. FEATURES

- Low capacitance
- Low clamping voltage
- Ultra-low leakage current
- Complies with IEC 61000-4-2 standards:Air discharge:±30kV
  Contact discharge:±30kV
- We declare that the material of product compliance with RoHS requirements and Halogen Free.

## 2. APPLICATIONS

- STB
- Router
- Modem
- Networking
- 10/100/1000 Ethernet

## 3. DEVICE MARKING AND ORDERING INFORMATION

| Device | Marking | Shipping |
|---|---|---|
| LTVS32H24CT1G | 24C | 3000/Tape&Reel |

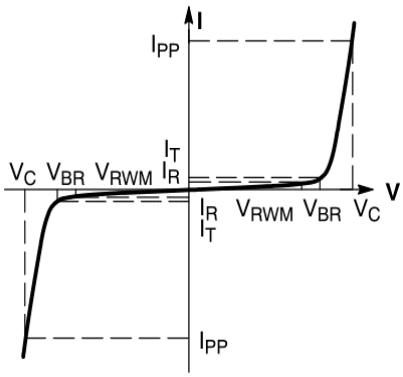
## 4. MAXIMUM RATINGS(Ta = 25ºC)

| Parameter | Symbol | Limits | Unit |
|---|---|---|---|
| IEC 61000−4−2 (ESD) Contact<br>Air | | ±30<br>±30 | KV |
| Peak pulse power@8/20 μs(Note 1) | PPP | 260 | W |
| Peak pulse current @8/20 μs(Note 1) | IPP | 6.5 | A |
| Operating Temperature Range | TJ | -55~+150 | ℃ |
| Storage Temperature Range | Tstg | -55~+150 | ℃ |

Note 1.Surge current waveform per Figure 1 according to IEC 61000-4-5.

## 5. ELECTRICAL CHARACTERISTICS (Ta= 25ºC)

| Symbol | Parameter |
|---|---|
| IPP | Maximum Reverse Peak Pulse Current |
| VC | Clamping Voltage @ IPP |
| VRWM | Working Peak Reverse Voltage |
| IR | Maximum Reverse Leakage Current @ VRWM |
| VBR | Breakdown Voltage @ IT |
| IT | Test Current |
| Ppk | Peak Power Dissipation |
| C | Capacitance @ VR = 0 and f = 1.0 MHz |




## 6. ELECTRICAL CHARACTERISTICS (Ta= 25ºC)

| Characteristic | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Reverse stand-off voltage | VRWM | | | | 24 | V |
| Breakdown Voltage | VBR | IT = 1mA | 25.9 | | 29 | V |
| Reverse leakage current | IR | VR = 24V | | | 0.05 | μA |
| Clamping Voltage(Note 1) | VC1 | IPP = 6.5A, tp=8/20μs | | | 40 | V |
| Clamping Voltage,TLP | VC2 | IPP= 4 A, tp=100ns<br>IPP= 8 A, tp=100ns<br>IPP= 16 A, tp=100ns | | 30<br>32<br>35 | | V |
| Dynamic resistance | RDYN | | | 0.6 | | Ω |
| Junction Capacitance | Cj | VR = 0V, f = 1MHz | | | 25 | pF |

Note 1.Surge current waveform per Figure 1 according to IEC 61000-4-5.

## 7. ELECTRICAL CHARACTERISTICS CURVES

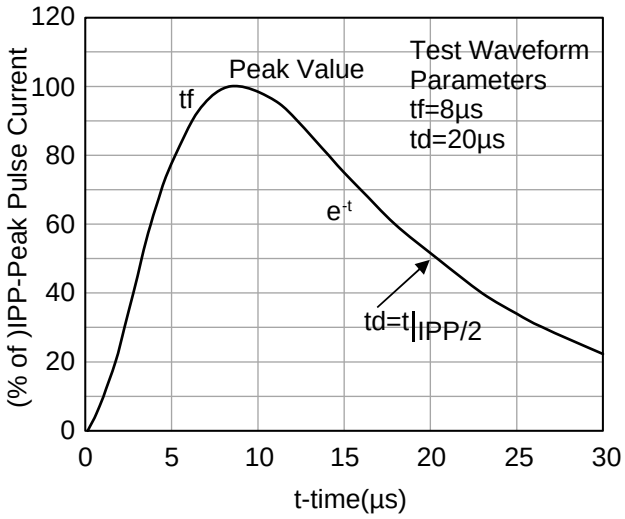



Figure 1. Pulse Waveform
according to IEC 61000-4-5

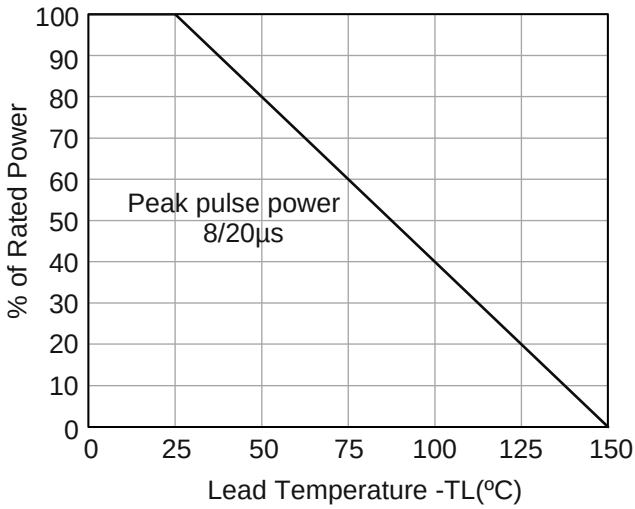



Figure 2. Power Derating Curve

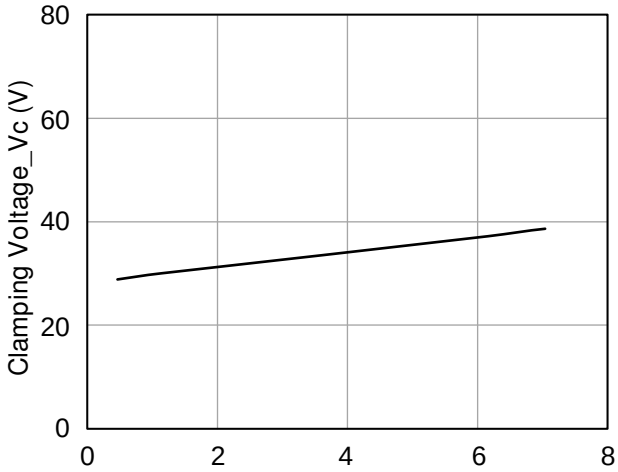



Figure 3.Clamping Voltage vs.Peak Pulse Current
according to IEC 61000-4-5.

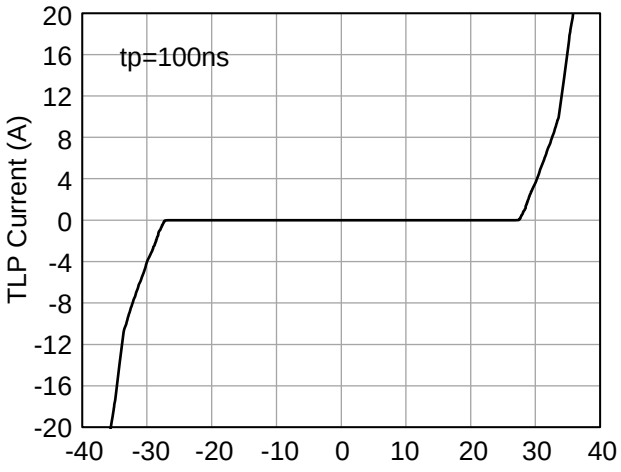



Figure 4. TLP Measurement

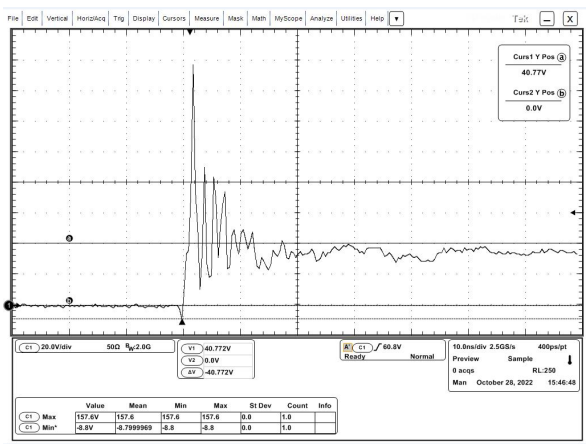


Figure 5. ESD Clamping Voltage Screenshot
Positive 8 kV Contact per IEC61000-4-2

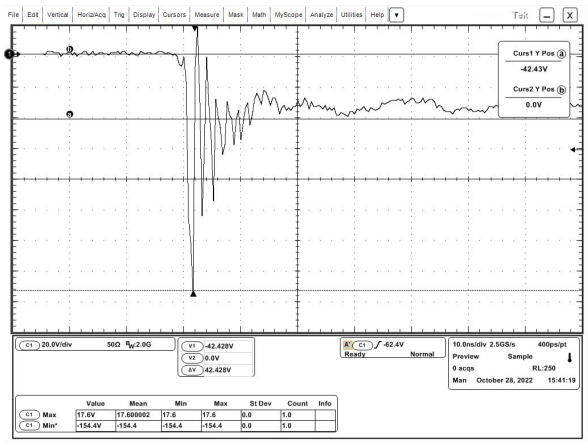
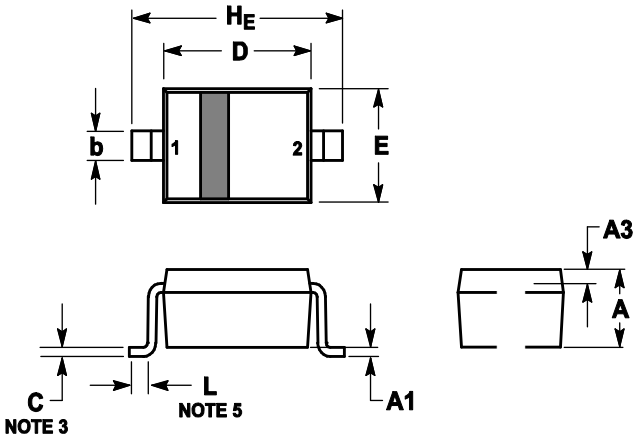


Figure 6. ESD Clamping Voltage Screenshot
Negative 8 kV Contact per IEC61000-4-2

## 8.OUTLINE AND DIMENSIONS

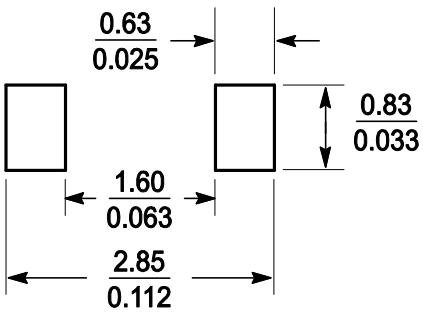



Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

| | MILLIMETERS | | | INCHES | | |
|---|---|---|---|---|---|---|
| DIM | MIN | NOM | MAX | MIN | NOM | MAX |
| A | 0.8 | 0.9 | 1 | 0.031 | 0.035 | 0.04 |
| A1 | 0 | 0.05 | 0.1 | 0 | 0.002 | 0.004 |
| A3 | 0.15REF | | | 0.006REF | | |
| b | 0.25 | 0.32 | 0.4 | 0.01 | 0.012 | 0.016 |
| C | 0.089 | 0.12 | 0.177 | 0.003 | 0.005 | 0.007 |
| D | 1.6 | 1.7 | 1.8 | 0.062 | 0.066 | 0.07 |
| E | 1.15 | 1.25 | 1.35 | 0.045 | 0.049 | 0.053 |
| L | 0.08 | | | 0.003 | | |
| $H_E$ | 2.3 | 2.5 | 2.7 | 0.09 | 0.098 | 0.105 |

## 9.SOLDERING FOOTPRINT



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- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.

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