# TEVC10R0V3B1X

ESD SUPPRESSOR

TOP-EMC

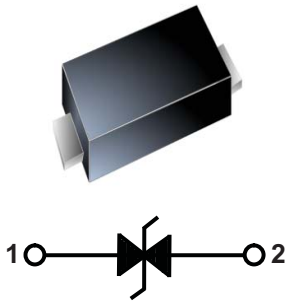
## Features

- 60W Peak Pulse Power Per Line(8/20us)
- 3.3V Working Peak Reverse Voltage
- Maximum Reverse Peak Pulse Current:4.5A
- ESD per IEC 61000-4-2(Contact):25KV
- ESD per IEC 61000-4-2(Air):30KV
- Clamping Voltage @IPP=1A:6V
- Junction Capacitance:10PF
- Package:SOD-523(0603)
- Polarity: Bidirectional

## Mechanical Characteristics

- Mechanical Characteristics
- Lead Finish: NiPdAu
- Case Material: “ Green ” Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below
- Marking Information: See Below

## Schematic And Configuration




## Ordering Information

| Part Number | Packaging | Reel Size |
|---|---|---|
| /TEVC10R0V3B1X | Tape & Reel | 7inch |



## Absolute Maximum Ratings (Ta=25°C,RH=45%-75%,unless otherwise noted)

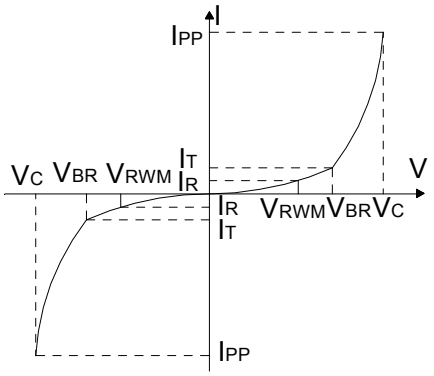
| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Operating Temperature Range | Tj | -55~+125 | °C |
| Storage Temperature Range | Tstg | -55~+150 | °C |

## Electrical Characteristics (Ta=25°C)

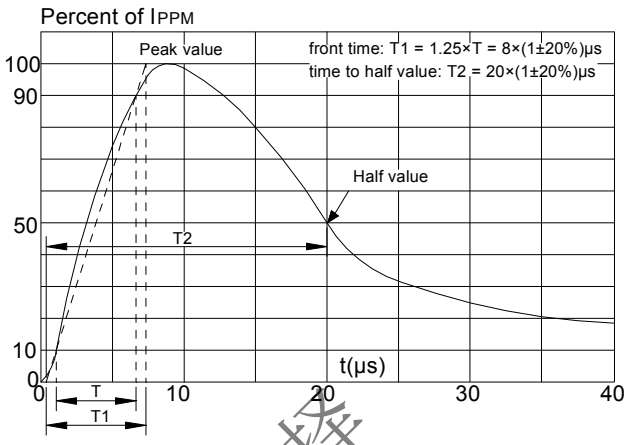
| Parameter | Symbol | Min | Type | Max | Unit | Test Condition |
|---|---|---|---|---|---|---|
| Reverse Working Voltage | Vrwm | | | 3.3 | V | |
| Breakdown Voltage | Vbr | 4 | | | V | It=1mA |
| Reverse Leakage Current | Ir | | | 1 | uA | Vrwm=3.3V |
| Clamping Voltage | Vc | | 6 | 8 | V | Ipp=1A(8×20us pulse) |
| Juntion Capacitance | Cj | | 9.5 | 15 | pF | Vr=0V,f=1MHz |

## Typical Performance Characteristics (Ta=25℃,unless otherwise noted)

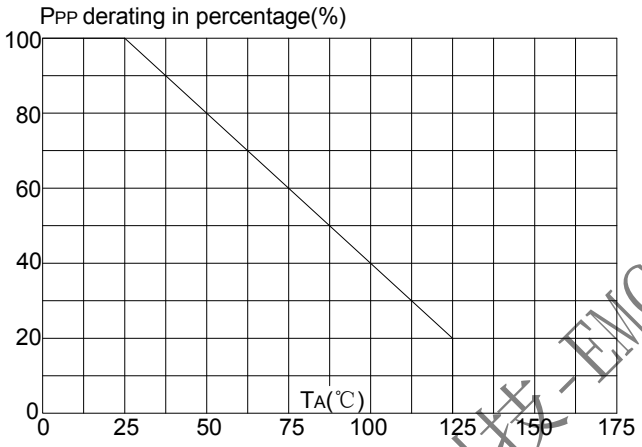
### V- I curve characteristics (Bi-directional)



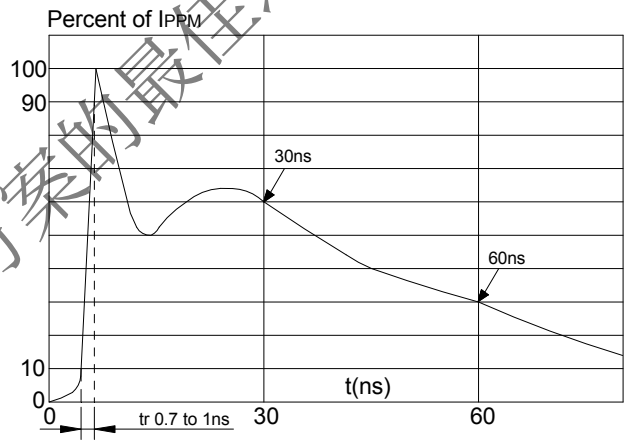

### Pulse waveform (8/20μs)




### Pulse derating curve

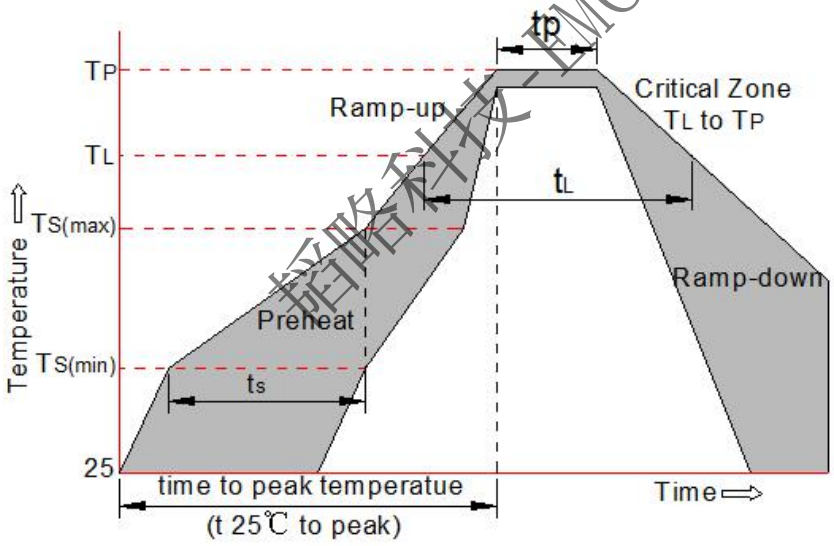



### ESD clamping (30kV contact)

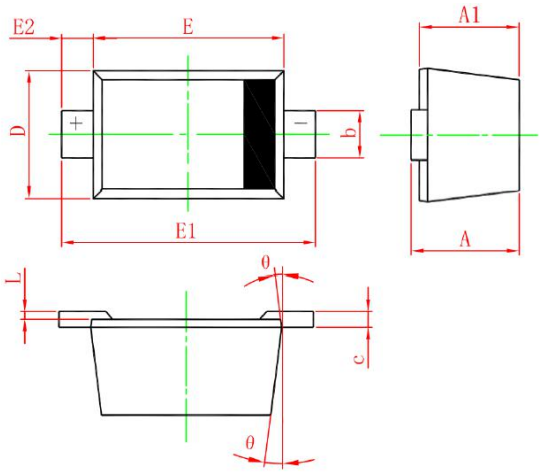


## Soldering Parameters

| Reflow Condition | | Pb-Free Assembly (see as bellow) |
|---|---|---|
| Pre Heat | -Temperature Min ($T_{s(min)}$) | +150℃ |
| | -Temperature Max($T_{s(max)}$) | +200℃ |
| | -Time (Min to Max) (ts) | 60-180 secs. |
| Average ramp up rate (Liquid us Temp ($T_L$) to peak) | | 3℃/sec. Max |
| $T_{s(max)}$ to $T_L$ - Ramp-up Rate | | 3℃/sec. Max |
| Reflow | -Temperature($T_L$) (Liquid us) | +217℃ |
| | -Temperature($t_L$) | 60-150 secs. |
| Peak Temp ($T_p$) | | +260(+0/-5)℃ |
| Time within 5℃ of actual Peak Temp ($t_p$) | | 30 secs. Max |
| Ramp-down Rate | | 6℃/sec. Max |
| Time 25℃ to Peak Temp ($T_P$) | | 8 min. Max |
| Do not exceed | | +260℃ |

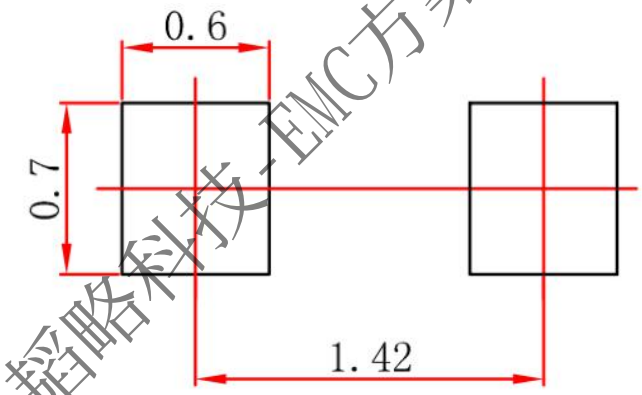


## Package Mechanical Data




| SYM | DIMENSIONS | | | | | |
|---|---|---|---|---|---|---|
| | MILLIMETERS | | | INCHES | | |
| | MIN | NOM | MAX | MIN | NOM | MAX |
| A | 0.51 | - | 0.77 | 0.020 | - | 0.031 |
| A1 | 0.50 | - | 0.70 | 0.020 | - | 0.028 |
| b | 0.25 | - | 0.35 | 0.010 | - | 0.014 |
| c | 0.08 | - | 0.15 | 0.003 | - | 0.006 |
| D | 0.75 | - | 0.85 | 0.030 | - | 0.033 |
| E | 1.10 | - | 1.30 | 0.043 | - | 0.051 |
| E1 | 1.50 | - | 1.70 | 0.059 | - | 0.067 |
| E2 | 0.20REF | | | 0.008REF | | |
| L | 0.01 | - | 0.07 | 0.001 | - | 0.003 |
| Φ | 7° REF | | | 7° REF | | |

## Suggested Land Pattern






## Contact Information

**SHENZHEN TOP-FLIGHT TECHNOLOGY CO.,LTD**
4th Floor, C Building, Quansen Industrial Park , Bulong Road, Longhua New District, Shenzhen
Tel: 86-755-82908191 Fax: 86-755-82908701 Email:kang@topleve.com
Website: http://www.topleve.com