

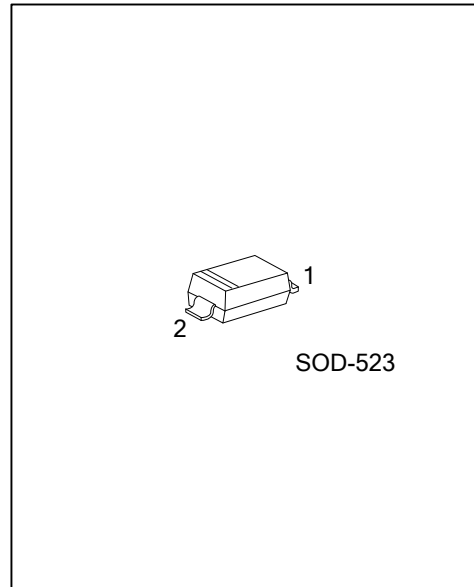


## ESD5V0L1B

Preliminary

TVS DIODE

### ULTRA LOW CLAMPING BI-DIRECTIONAL ESD TRANSIENT PROTECTION DIODE



#### DESCRIPTION

The UTC **ESD5V0L1B** is ultra-low clamping ESD transient bidirectional protection diode, it uses UTC's advanced technology to provide customers with low leakage current and high integration, etc.

The UTC **ESD5V0L1B** is suitable for ESD protection and high density boards.

#### FEATURES

- \* Bi-directional, symmetrical working voltage
- \* Ultra low clamping voltage
- \* Ultra low dynamic resistance

#### FEATURES



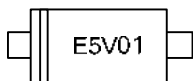
#### ORDERING INFORMATION

| Ordering Number  | Package | Pin Assignment |   | Packing   |
|------------------|---------|----------------|---|-----------|
|                  |         | 1              | 2 |           |
| ESD5V0L1BG-CC2-R | SOD-523 | K              | K | Tape Reel |

Note: Pin Assignment: K: Cathode

|   |  |
|---|--|
| <p>ESD5V0L1BG-CC2-R</p> <ul style="list-style-type: none"> <li>(1) Packing Type</li> <li>(2) Package Type</li> <li>(3) Green Package</li> </ul> | <ul style="list-style-type: none"> <li>(1) R: Tape Reel</li> <li>(2) CC2 : SOT-523</li> <li>(3) G: Halogen Free and Lead Free</li> </ul> |
|---|--|

#### MARKING



■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

| PARAMETER                                     |                                | SYMBOL    | RATINGS    | UNIT             |
|---|--------------------------------|-----------|------------|------------------|
| ESD Discharge                                 | IEC61000-4-2 Contact Discharge | $V_{ESD}$ | $\pm 25$   | kV               |
| Peak Pulse current ( $t_p=8/20 \mu\text{s}$ ) |                                | $I_{PP}$  | $\pm 2.5$  | A                |
| Operating Junction Temperature                |                                | $T_J$     | 125        | $^\circ\text{C}$ |
| Operating Temperature (Note 2)                |                                | $T_{OPR}$ | -55 ~ +125 | $^\circ\text{C}$ |
| Storage Temperature                           |                                | $T_{STG}$ | -65 ~ +150 | $^\circ\text{C}$ |

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

| PARAMETER                   | SYMBOL    | TEST CONDITIONS                         | MIN  | TYP | MAX | UNIT     |
|-----------------------------|-----------|---|------|-----|-----|----------|
| Reverse working voltage     | $V_{RMW}$ |   | -5.0 |     | 5.0 | V        |
| Reverse current             | $I_R$     | $V_R=3.0\text{V}$                       |      | <1  | 50  | nA       |
| Line capacitance            | $C_L$     | $V_R=0\text{V}$ , $f=1\text{MHz}$       |      | 20  | 30  | pF       |
| Clamping voltage            | $V_{CL}$  | $I_{PP}=5\text{A}$ , $t_p=30\text{ns}$  |      | 17  |     | V        |
|                             |           | $I_{PP}=5\text{A}$ , $t_p=30\text{ns}$  |      | 20  |     | V        |
|                             |           | $I_{PP}=16\text{A}$ , $t_p=30\text{ns}$ |      | 22  |     | V        |
|                             |           | $I_{PP}=16\text{A}$ , $t_p=30\text{ns}$ |      | 25  |     | V        |
| Dynamic resistance (Note 1) | $R_{DYN}$ | $t_p=30\text{ns}$                       |      | 0.3 |     | $\Omega$ |

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