# ESD8LL5V0 <br> Transient Voltage Suppressors ESD Protection Diode 

## General description

Silicon Diode in a SOD-882 Plastic Package.

## Green Product

## FEATURES

- Ultra low Capacitance <0.9 pF
- Low Clamping voltage.
- Small Body Outline Dimensions
- Low Leakage Current
- Response Time is Typically $<1 \mathrm{~ns}$
- ESD Rating of Class 3 ( $>16 \mathrm{kV}$ ) per Human Body Model
- RoHS Compliant


SOD882 Package

- Green EMC
- Matte Tin(Sn) Lead Finish
- Band Indicates Cathode
- Weight: approx. 0.001 g

Absolute Maximum Ratings ( $\mathrm{T}_{\mathrm{A}}=25^{\circ} \mathrm{C}$ unless otherwise noted)

| Symbol |  |  | meter | Value | Units | Device Marking: |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PD | Total Power Dissipation on FR-5 Broad |  |  | 150 | mW | Device Type | Marking | Shipping |
| TL | Max Lead Solder Temperature range (10 Second Duration) |  |  | 260 | ${ }^{\circ} \mathrm{C}$ | ESD8LL5V0 | L or 5L | 10,000/Reel |
| $\mathrm{T}_{\text {stg }}$ | Storage Temperature Range |  |  | -55 to +150 | ${ }^{\circ} \mathrm{C}$ |  |  |  |
| TJ | Junction Temperature |  |  | +150 | ${ }^{\circ} \mathrm{C}$ |  |  |  |
| ESD | IEC61000-4-2 |  | Air Discharge Contact Discharge | $\begin{gathered} \pm 15 \\ \pm 8 \end{gathered}$ | KV |  |  |  |
| EFT | IEC61000-4-4 |  |  | 40 | A |  |  |  |
| ESD | Per Human Body Model |  |  | 16 | KV |  |  |  |
|  | Symbol | Parameter |  |  |  |  |  |  |
|  | $\mathrm{V}_{\mathrm{C}}$ | Clamping Voltage @ lpp |  |  |  |  |  |  |  |  |
|  | lpp | Peak Pulse Current |  |  |  |  |  |  |  |  |
|  | $V_{B R}$ | Breakdown Voltage @ IT |  |  |  |  |  |  |  |  |
|  | $I_{T}$ | Test Current |  |  |  |  |  |  |
|  | $\mathrm{I}_{\mathrm{R}}$ | Reverse Leakage Current @ V RWm |  |  |  | $1 /$ |  |  |
|  | $\mathrm{V}_{\text {RWM }}$ | Reverse Standoff Voltage |  |  |  |  |  |  |
|  | $\mathrm{V}_{\mathrm{F}}$ | Forward Voltage@ IF |  |  |  |  |  |  |
|  | $\mathrm{I}_{\mathrm{F}}$ | Forward Current |  |  |  | V-I characteristics for a uni-directional TVS |  |  |

Electrical Characteristics ( $\mathrm{T}_{\mathrm{A}}=25^{\circ} \mathrm{C}$ unless otherwise noted)

| Device Type | $\mathrm{V}_{\mathrm{RWM}}$ <br> (Volts) | IR @ VRwm <br> ( $\mu \mathrm{A}$ ) | $V_{B R} @ I_{T}$ <br> (Note 1) <br> (Volts) |  | $\begin{gathered} \mathbf{I}_{\mathbf{T}} \\ (\mathrm{mA}) \end{gathered}$ | $\begin{gathered} \mathrm{V}_{\mathrm{c}} @ \mathrm{IPp}^{*}=1 \mathrm{~A} \\ \text { (Volts) } \end{gathered}$ | $\mathrm{V}_{\mathrm{c}}$ @ Max $\mathrm{IPP}^{*}$ | IPP* <br> (A) | $\begin{gathered} V_{R}=0 \mathrm{~V}, \mathrm{f}=1 \mathrm{MHz} \\ (\mathrm{pF}) \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Max | Max | Min | Max |  | Typ. | Max | Max | Typ. |
| ESD8LL5V0 | 5.0 | 1 | 5.4 | --- | 1.0 | 8 | 20 | 4 | 0.65 |

* Surge current waveform per Figure 1.

Note 1: VBR is measured with a pulse test current IT at an ambient temperature of $25^{\circ} \mathrm{C}$.

## SURGE CURRENT WAVEFORM:



Figure $1.8 \times 20 \mu \mathrm{~s}$ Pulse Waveform

SOD882 Package Outline


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