

# ESD Suppressor AEC-Q101

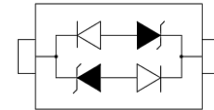
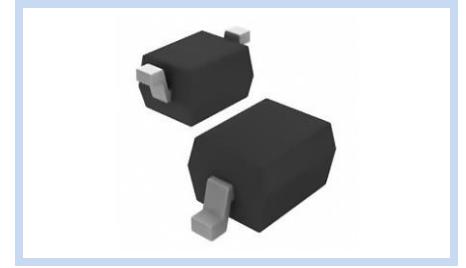
## 3.3V Bi-Directional SOD-323

MEA3V32B350S323

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### FEATURE

- IEC61000-4-2 (ESD):  $\pm 30\text{KV}$  (Air),  $\pm 30\text{KV}$  (Contact)
- IEC61000-4-4 (EFT):  $40\text{A}(5/50\text{ns})$
- IEC61000-4-5 (Lightning):  $20\text{A}(8/20\mu\text{s})$
- Peak Power Dissipation of  $350\text{W}$  ( $8/20\mu\text{s}$ )
- Low Clamping Voltage and Low Leakage Current
- Application: Microprocessor Based Equipment, Peripherals, Portable Instrumentation, Personal Digital Assistants
- AEC-Q101 Compliant



### MECHANICAL DATA

- Case: SOD-323, Molded Epoxy Meets UL94V-0
- Terminals: Solderable per MIL-STD-750, Method 2026

### ABSOLUTE MAXIMUM RATINGS

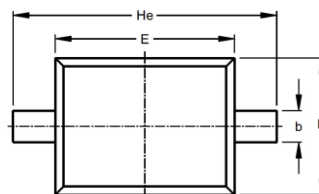
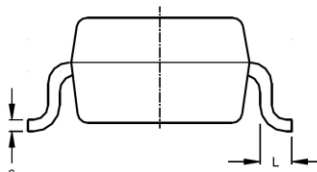
| Parameter, $T_A = 25^\circ\text{C}$              |                                  | Symbol    | Value       | Unit             |
|--------------------------------------------------|----------------------------------|-----------|-------------|------------------|
| Peak Pulse Power                                 | $t_p = 8/20\mu\text{s}$ waveform | $P_{PP}$  | 350         | W                |
| ESD Discharge (IEC61000-4-2)                     | Air                              | $V_{ESD}$ | $\pm 30$    | KV               |
|                                                  | Contact                          |           | $\pm 30$    |                  |
| Lead Soldering Temperature (10 seconds Duration) |                                  | $T_L$     | 260         | $^\circ\text{C}$ |
| Operating Junction Temperature Range             |                                  | $T_J$     | -55 to +125 | $^\circ\text{C}$ |
| Storage Temperature Range                        |                                  | $T_{STG}$ | -55 to +150 | $^\circ\text{C}$ |

### ELECTRICAL CHARACTERISTICS

| Parameter, $T_A = 25^\circ\text{C}$ |                                                 | Symbol    | Min | Typ. | Max  | Unit          |
|-------------------------------------|-------------------------------------------------|-----------|-----|------|------|---------------|
| Reverse Stand-Off Voltage           | --                                              | $V_{RWM}$ | -   | -    | 3.3  | V             |
| Reverse Breakdown Voltage           | $I_T = 1\text{mA}$                              | $V_{BR}$  | 3.6 | -    | -    | V             |
| Reverse Leakage Current             | $V_{RWM} = 3.3\text{V}$                         | $I_R$     | -   | -    | 0.1  | $\mu\text{A}$ |
| Clamping Voltage                    | $I_{PP} = 1\text{A}$ , $t_p = 8/20\mu\text{s}$  | $V_C$     | -   | -    | 6.5  | V             |
|                                     | $I_{PP} = 10\text{A}$ , $t_p = 8/20\mu\text{s}$ |           | -   | -    | 12   |               |
|                                     | $I_{PP} = 20\text{A}$ , $t_p = 8/20\mu\text{s}$ |           | -   | -    | 17.5 |               |
| Junction Capacitance                | $V_{RWM} = 0\text{V}$ , $f = 1\text{MHz}$       | $C_J$     | -   | 1.0  | 1.5  | pF            |

### DIMENSIONS

| Item | Min (mm) | Max (mm) |
|------|----------|----------|
| A1   | -        | 0.14     |
| A2   | 0.80     | 0.96     |
| b    | 0.25     | 0.40     |
| c    | 0.08     | 0.18     |
| D    | 1.20     | 1.40     |
| E    | 1.60     | 1.80     |
| He   | 2.30     | 2.80     |
| L    | 0.25     | 0.40     |
| X    | 0.80     |          |
| X1   | 3.00     |          |
| Y    | 0.80     |          |



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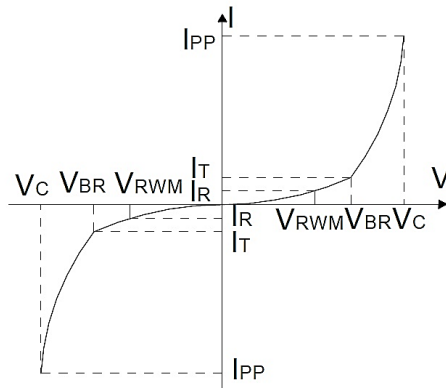
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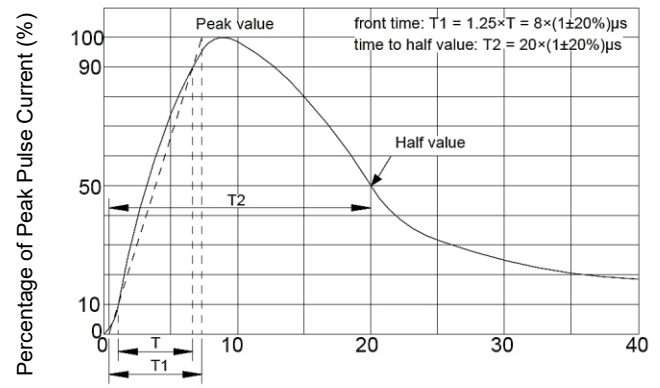
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### CHARACTERISTIC CURVES

V- I Characteristics

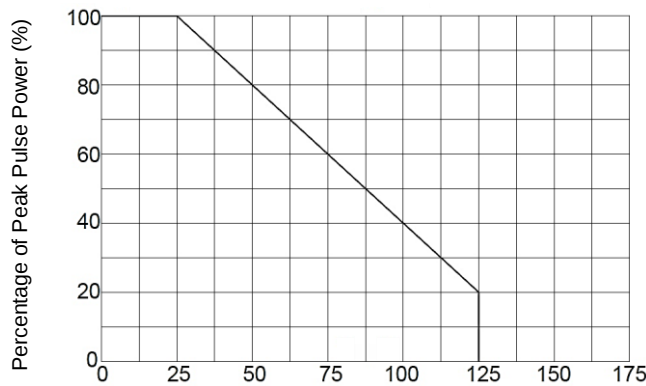


Pulse Waveform



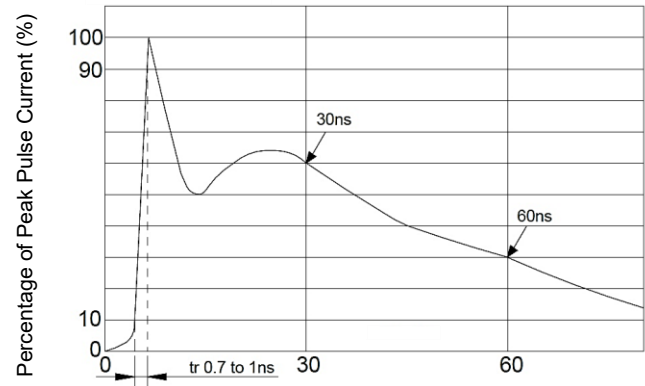
Time ( $\mu s$ )

Pulse Derating Curve



$T_A$ , Ambient Temperature ( $^{\circ}C$ )

ESD Clamping (30KV Contact)



Time (ns)