

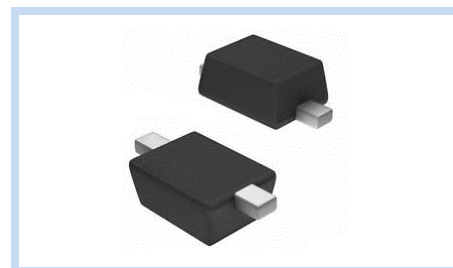
# ESD Suppressor 15V Unidirectional SOD-923

ME151U30S923

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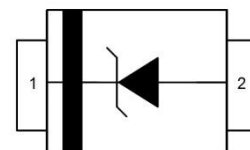
## FEATURE

- IEC 61000-4-2 ESD:  $\pm 30\text{KV}$  (Air)  $\pm 30\text{KV}$  (Contact)
- IEC 61000-4-4 EFT: 40A (5/50ns)
- ESD Protection for one Unidirectional Channel
- Low Clamping Voltage



## APPLICATION

- Cellular Handsets & Accessories
- Personal Digital Assistants (PDAS)
- Notebooks & Handhelds
- Cordless Phones
- Peripherals
- Mp3 Players



## MAXIMUM RATINGS AND CHARACTERISTICS

| Parameter                                    | Symbol                | Value    | Unit               |
|----------------------------------------------|-----------------------|----------|--------------------|
| ESD Voltage (Contact discharge)              | $V_{\text{ESD}}$      | $\pm 30$ | KV                 |
| ESD Voltage (Air discharge)                  |                       | $\pm 30$ |                    |
| Peak Pulse Current ( $t_p=8/20\mu\text{s}$ ) | $I_{\text{PP}}$       | 2        | A                  |
| Peak Pulse Power ( $t_p=8/20\mu\text{s}$ )   | $P_{\text{PP}}$       | 40       | W                  |
| Lead Soldering Temperature (10 Seconds)      | $T_L$                 | 260      | $^{\circ}\text{C}$ |
| Operating & Storage Temperature Range        | $T_J, T_{\text{STG}}$ | -55~+150 | $^{\circ}\text{C}$ |

## ELECTRICAL CHARACTERISTICS

| Parameter                      | Condition                                      | Symbol           | Min. | Typ. | Max. | Unit          |
|--------------------------------|------------------------------------------------|------------------|------|------|------|---------------|
| Reverse Stand-Off Voltage      | --                                             | $V_{\text{RWM}}$ | --   | --   | 15   | V             |
| Reverse Breakdown Voltage      | $I_{\text{BR}}=1\text{mA}$                     | $V_{\text{BR}}$  | 17   | --   | --   | V             |
| Reverse Leakage Current        | $V_R=15\text{V}$                               | $I_R$            | --   | --   | 1    | $\mu\text{A}$ |
| Clamping Voltage               | $I_{\text{PP}}=2\text{A}, t_p=8/20\mu\text{s}$ | $V_C$            | --   | --   | 30   | V             |
| Off State Junction Capacitance | 0Vdc, $f=1\text{MHz}$                          | $C_J$            | --   | --   | 15   | pF            |

Notes:  $T_J=25^{\circ}\text{C}$  unless otherwise specified,  $V_F=1.1\text{V}$  Max,  $I_F=10\text{mA}$

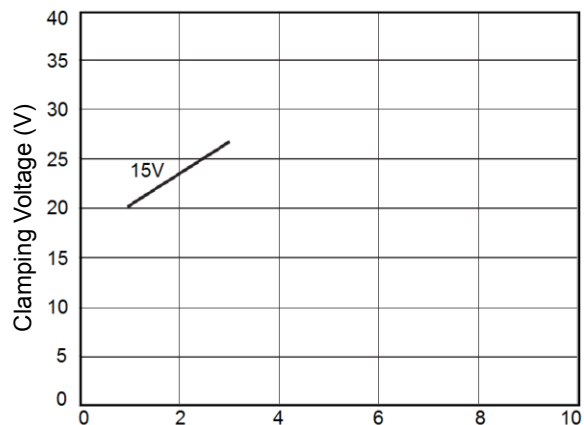
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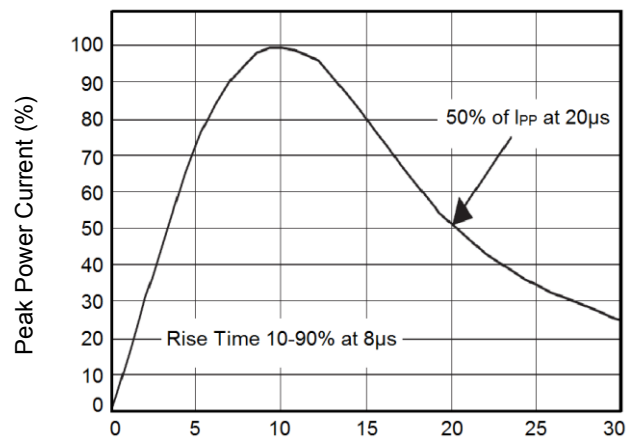
## CHARACTERISTIC CURVES

Clamping Voltage vs. Peak Pulse Current



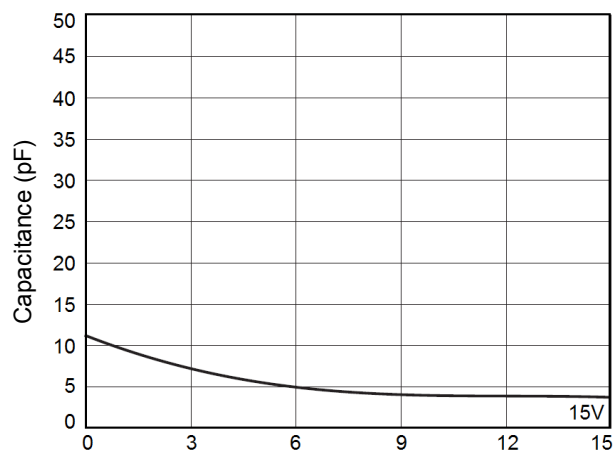
$I_{PP}$ , Peak Pulse Current (A)

Pulse Waveforms



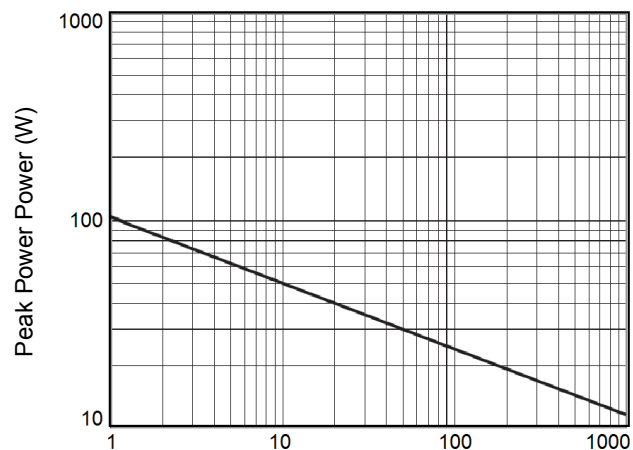
Time ( $\mu$ s)

Capacitance Vs Bias Voltage at 1MHz



Bias Voltage (V)

Non-Repetitive Peak Pulse Power vs Pulse Time



Pulse Time ( $\mu$ s)

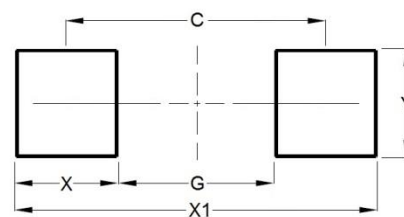
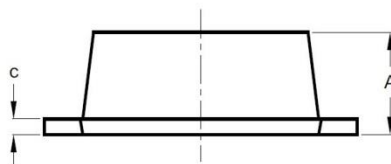
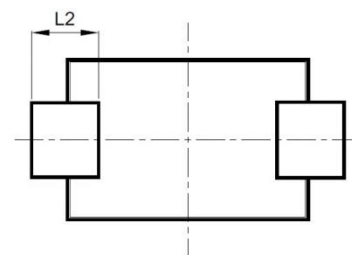
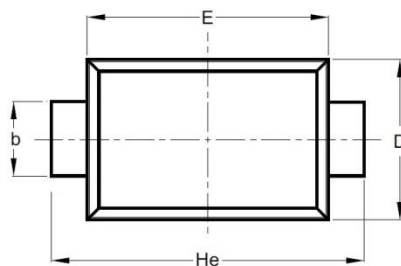
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## DIMENSIONS AND RECOMMENDED LAND PATTERN

| Item | Min (mm) | Max (mm) |
|------|----------|----------|
| A    | 0.35     | 0.45     |
| b    | 0.15     | 0.25     |
| C    | 0.08     | 0.18     |
| D    | 0.55     | 0.65     |
| E    | 0.75     | 0.85     |
| He   | 0.95     | 1.05     |
| L2   | 0.10     | 0.10     |
| C    | 0.90     | 0.90     |
| G    | 0.60     | 0.60     |
| X    | 0.30     | 0.30     |
| X1   | 1.20     | 1.20     |
| Y    | 0.40     | 0.40     |



\*Specifications subject to change without notice.