

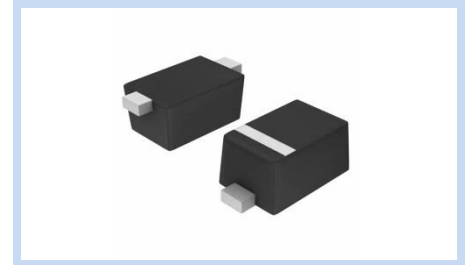
# ESD Supressor 5V Unidirectional SOD-523

ME51U9V8S523200

MERITEK

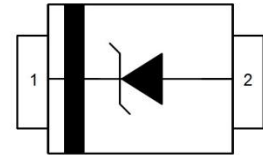
## FEATURE

- IEC 61000-4-2 ESD:  $\pm 30\text{KV}$  (Air)  $\pm 30\text{KV}$  (Contact)
- ESD Protection for one Unidirectional Channel
- Low Leakage Current
- Low Clamping Voltage
- Solid-State Silicon-Avalanche Technology



## APPLICATION

- Cellular Handsets & Accessories
- Personal Digital Assistants (PDAs)
- Notebooks & Handhelds
- Cordless Phones
- Digital Cameras
- Peripherals



## MAXIMUM RATINGS AND CHARACTERISTICS

| Parameter                                    | Symbol         | Value    | Unit               |
|--|----------------|----------|--------------------|
| ESD Voltage (Contact discharge)              | $V_{ESD}$      | $\pm 30$ | KV                 |
| ESD Voltage (Air discharge)                  |                | $\pm 30$ |                    |
| Peak Pulse Current ( $t_p=8/20\mu\text{s}$ ) | $I_{PP}$       | 18       | A                  |
| Operating & Storage Temperature Range        | $T_J, T_{STG}$ | -55~+150 | $^{\circ}\text{C}$ |

## ELECTRICAL CHARACTERISTICS

| Parameter                      | Condition                                | Symbol    | Min. | Typ. | Max. | Unit          |
|--------------------------------|--|-----------|------|------|------|---------------|
| Reverse Stand-Off Voltage      | --                                       | $V_{RWM}$ | --   | --   | 5    | V             |
| Reverse Breakdown Voltage      | $I_{BR}=1\text{mA}$                      | $V_{BR}$  | 6    | --   | --   | V             |
| Reverse Leakage Current        | $V_R=5\text{V}$                          | $I_R$     | --   | --   | 1    | $\mu\text{A}$ |
| Clamping Voltage               | $I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$  | $V_C$     | --   | --   | 9.8  | V             |
|                                | $I_{PP}=18\text{A}, t_p=8/20\mu\text{s}$ |           | --   | --   | 25   | A             |
| Off State Junction Capacitance | $V_{dc}=0, f=1\text{MHz}$                | $C_J$     | --   | 200  | --   | pF            |

Notes:  $T_J=25^{\circ}\text{C}$  unless otherwise specified

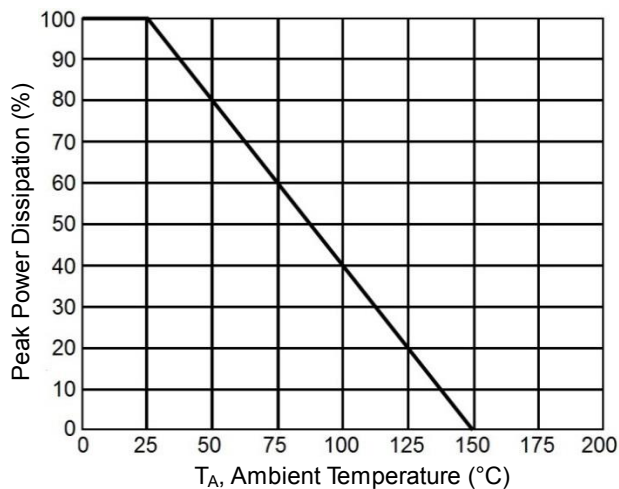
# ESD Suppressor 5V Unidirectional SOD-523

ME51U9V8S523200

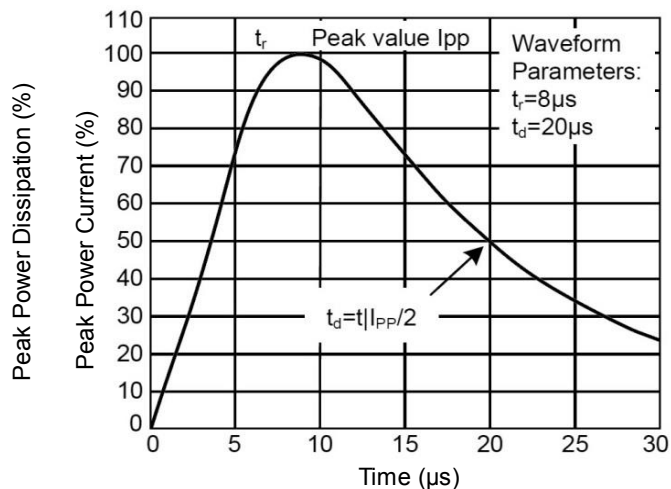
MERITEK

## CHARACTERISTIC CURVES

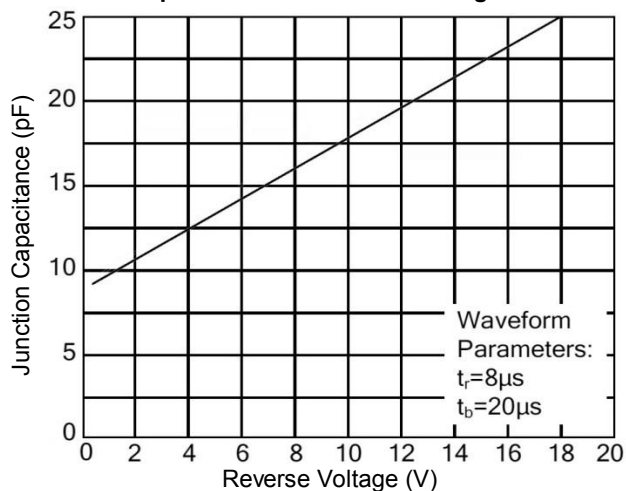
Derating Curve



Pulse Waveforms

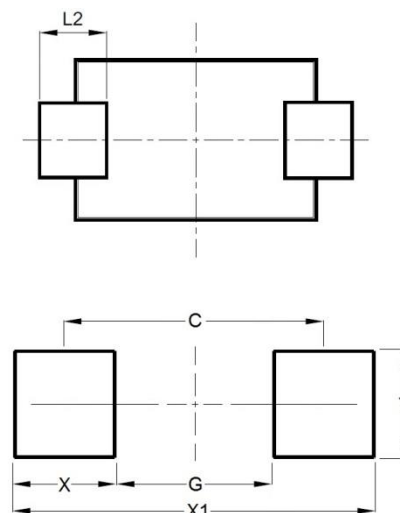
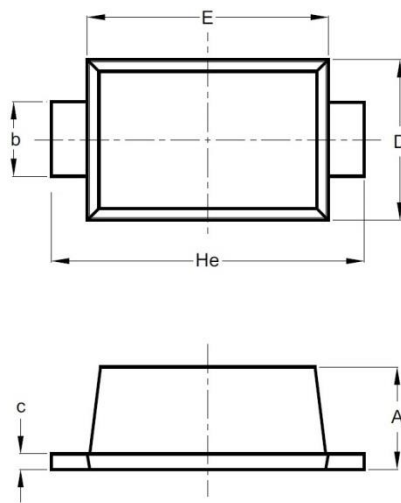


Capacitance vs. Reverse Voltage



## DIMENSIONS AND RECOMMENDED LAND PATTERN

| Item | Min (mm) | Max (mm) |
|------|----------|----------|
| A    | 0.50     | 0.70     |
| b    | 0.25     | 0.35     |
| C    | 0.07     | 0.20     |
| D    | 0.70     | 0.90     |
| E    | 1.10     | 1.30     |
| He   | 1.50     | 1.70     |
| L2   | 0.15     | 0.25     |
| C    | 1.40     | 1.40     |
| G    | 0.80     | 0.80     |
| X    | 0.60     | 0.60     |
| X1   | 2.00     | 2.00     |
| Y    | 0.70     | 0.70     |



\*Specifications subject to change without notice.