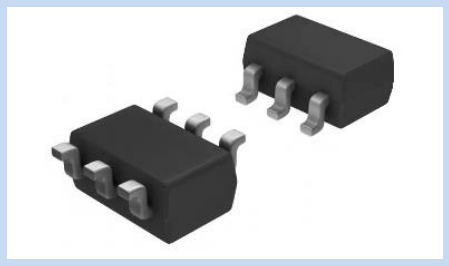
# ESD Suppressor AEC-Q101
# 5.25V 2-Unidirectional SOT-23-6

ME5V252U12S236

MERITEK

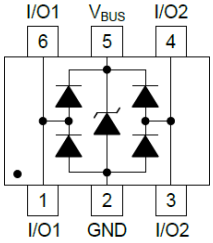
## FEATURE

- IEC 61000-4-2 ESD: ±15KV (Air) ±8KV (Contact)
- ESD Protection for two Unidirectional Channels
- Low Leakage Current and Clamping Voltage
- Solid-State Silicon-Avalanche Technology
- AEC-Q101 Qualified



## APPLICATION

- USB Power and Data lines Protection
- LAN applications
- Video lines Protection
- Microcontroller Input Protection
- Handheld electronics

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## MAXIMUM RATINGS AND CHARACTERISTICS

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| ESD Voltage (Contact discharge) | $V_{ESD}$ | ±8 | KV |
| ESD Voltage (Air discharge) | | ±15 | |
| Peak Pulse Current (tp=8/20μs) | $I_{PP}$ | 5 | A |
| Storage & Operating Temperature Range | $T_{STG}$ ,$T_J$ | -55~+150 | ℃ |

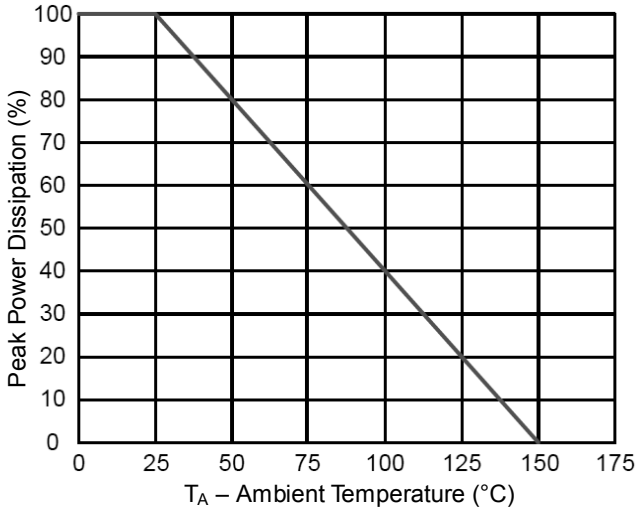
## ELECTRICAL CHARACTERISTICS

| Parameter | Condition | Symbol | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Reverse Stand-Off Voltage | -- | $V_{RWM}$ | -- | -- | 5.25 | V |
| Reverse Breakdown Voltage | $I_{BR}$=1mA | $V_{BR}$ | 6 | -- | -- | V |
| Reverse Leakage Current | $V_R$=5.25V, Each I/O pin | $I_R$ | -- | -- | 1 | μA |
| Clamping Voltage | $I_{PP}$=1A, tp=8/20μs | $V_C$ | -- | -- | 12 | V |
| | $I_{PP}$=5A, tp=8/20μs | | -- | -- | 17 | |
| Off State Junction Capacitance | Vdc=0, f=1MHz, Between I/O pins and GND | $C_J$ | -- | 3.5 | -- | pF |

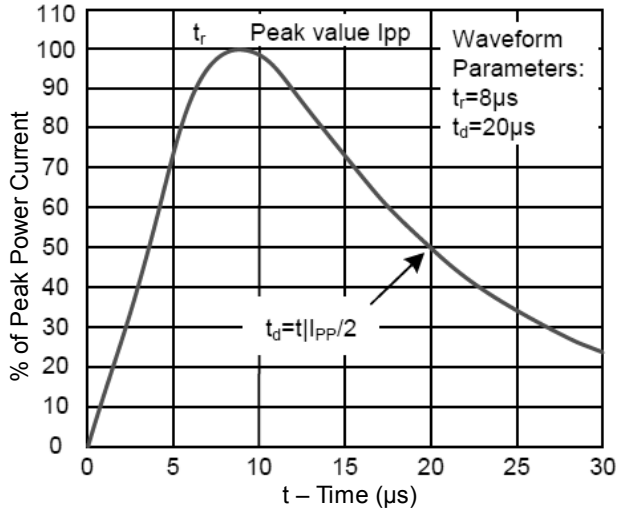
Notes:
1. $T_J$= 25ºC unless otherwise specified

## CHARACTERISTIC CURVES

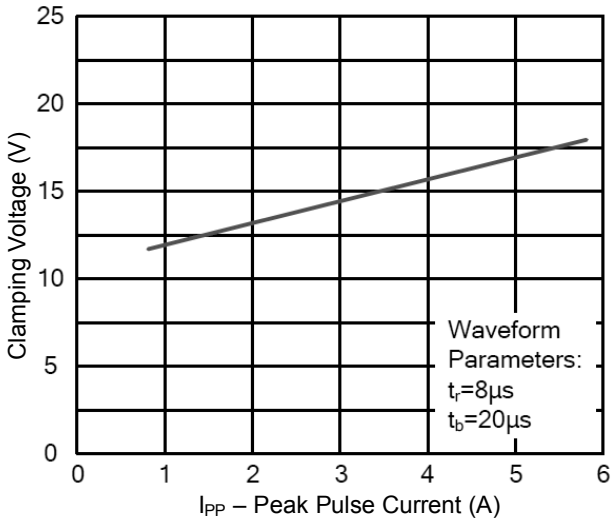
**Power Derating Curve**



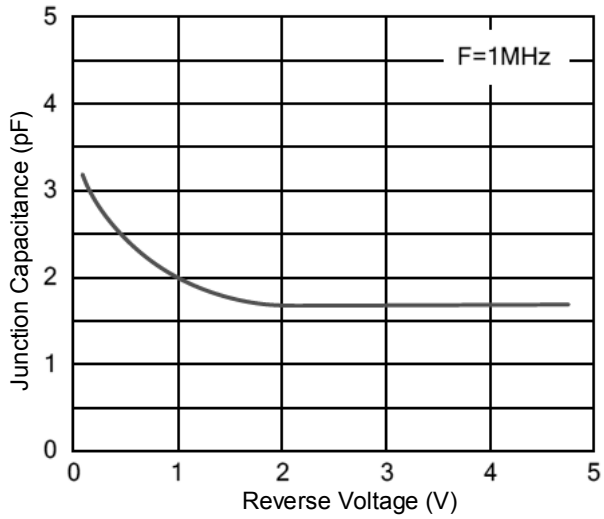

**Pulse Waveforms**




**Clamping Voltage vs. Peak Pulse Current**




**Capacitance vs. Reverse Voltage**



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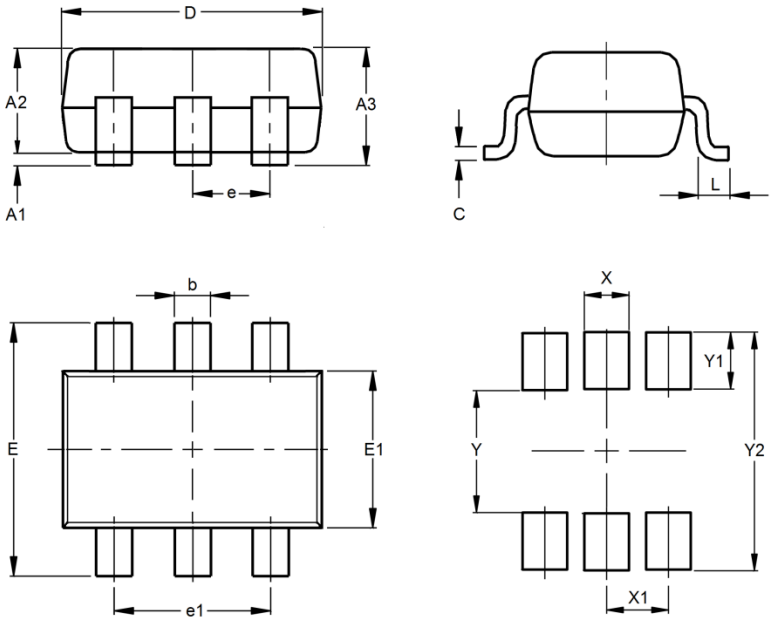
## DIMENSIONS AND RECOMMENDED LAND PATTERN

| Item | Min (mm) | Max (mm) |
|---|---|---|
| A1 | 0.15 | 0.15 |
| A2 | 0.90 | 1.30 |
| A3 | 1.45 | 1.45 |
| b | 0.30 | 0.50 |
| C | 0.08 | 0.22 |
| D | 2.80 | 3.00 |
| e | 0.93 | 0.97 |
| e1 | 1.90 | 1.90 |
| E | 2.60 | 3.00 |
| E1 | 1.50 | 1.70 |
| L | 0.30 | 0.60 |
| Y | 1.60 | 1.60 |
| Y1 | 0.79 | 0.79 |
| Y2 | 3.10 | 3.10 |
| X | 0.55 | 0.55 |
| X1 | 0.94 | 0.94 |




*Specifications subject to change without notice.