

ESD Suppressor AEC-Q101 5V 2-Unidirectional SOT-323

ME52U15S323TA

MERITEK

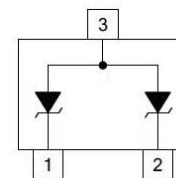
FEATURE

- IEC 61000-4-2 ESD: $\pm 15\text{KV}$ (Air) $\pm 8\text{KV}$ (Contact)
- ESD Protection for two Unidirectional Channels
- Low Leakage Current
- Ultra Low Capacitance and Clamping Voltages
- Solid-State Silicon-Avalanche Technology
- AEC-Q101 Qualified



APPLICATION

- HDMI Interface Protection
- Mobile Display Digital Interface
- Rf/Antenna Circuits
- Usb 2.0 & Firewire Ports
- HBT Power Amp Protection
- GaAs Photodetector Protection



MAXIMUM RATINGS AND CHARACTERISTICS

| Parameter | Symbol | Value | Unit |
|--|----------------|----------|--------------------|
| ESD Voltage (Contact discharge) | V_{ESD} | ± 8 | KV |
| ESD Voltage (Air discharge) | | ± 15 | |
| Peak Pulse Current ($t_p=8/20\mu s$) | I_{PP} | 3 | A |
| Operating & Storage Temperature Range | T_J, T_{STG} | -55~+150 | $^{\circ}\text{C}$ |

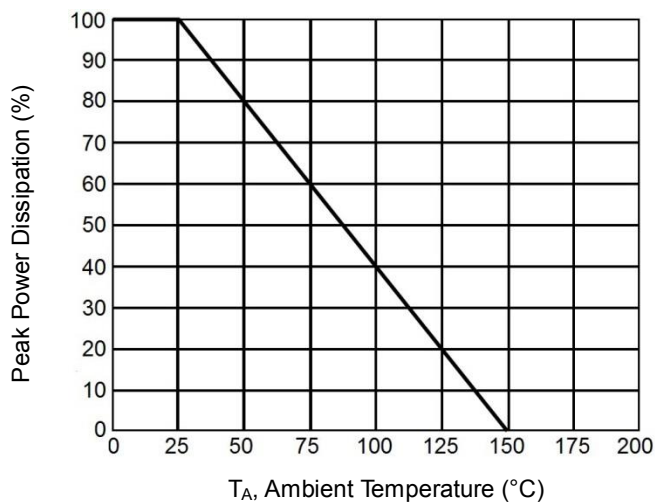
ELECTRICAL CHARACTERISTICS

| 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 | $V_R=5\text{V}$, Each I/O Pin | I_R | -- | -- | 1 | μA |
| Clamping Voltage | $I_{PP}=3\text{A}$, $t_p=8/20\mu s$ | V_C | -- | -- | 15 | V |
| Off State Junction Capacitance | $V_{dc}=0$, $f=1\text{MHz}$, Between I/O Pins and GND | C_J | -- | 0.8 | -- | pF |

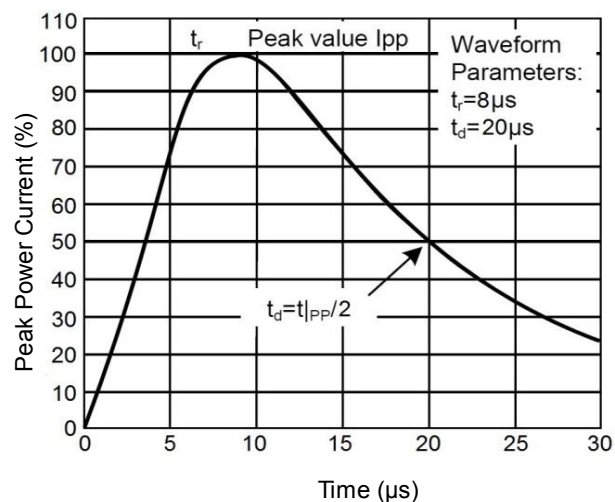
Notes: $T_J=25^{\circ}\text{C}$ unless otherwise specified

CHARACTERISTIC CURVES

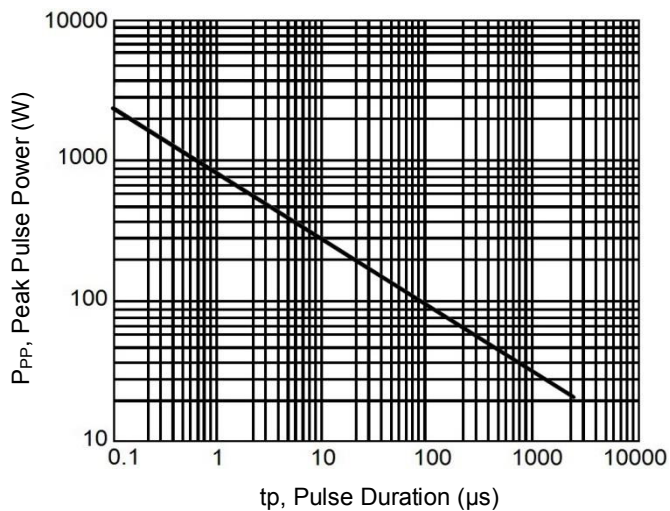
Derating Curve



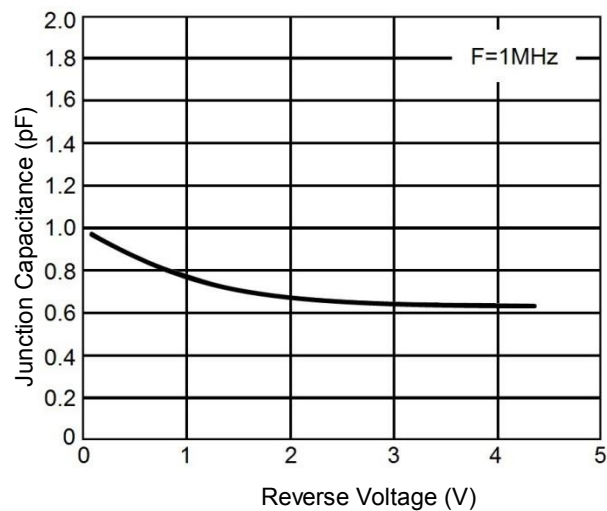
Pulse Waveforms



Capacitance vs. Reverse Voltage



Capacitance vs. Reverse Voltage



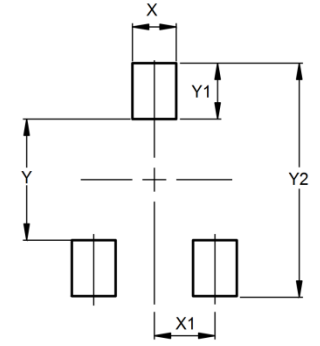
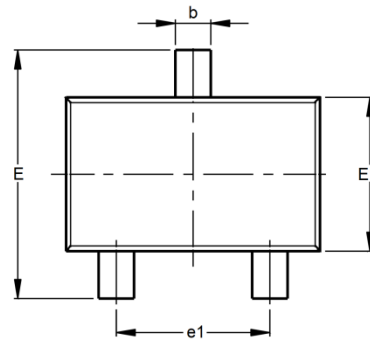
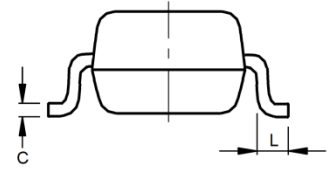
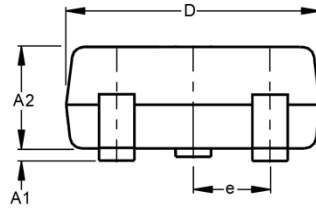
ESD Suppressor AEC-Q101 5V 2-Unidirectional SOT-323

ME52U15S323TA

MERITEK

DIMENSIONS AND RECOMMENDED LAND PATTERN

| Item | Min (mm) | Max (mm) |
|------|----------|----------|
| A1 | - | 0.10 |
| A2 | - | 1.00 |
| b | 0.20 | 0.40 |
| C | 0.05 | 0.20 |
| D | 1.80 | 2.20 |
| e | 0.65 | 0.65 |
| e1 | 1.30 | 1.30 |
| E | 2.00 | 2.20 |
| E1 | 1.15 | 1.35 |
| L | 0.10 | - |
| X | 0.45 | 0.45 |
| X1 | 0.65 | 0.65 |
| Y | 1.50 | 1.50 |
| Y1 | 0.55 | 0.55 |
| Y2 | 2.50 | 2.50 |



*Specifications subject to change without notice.