

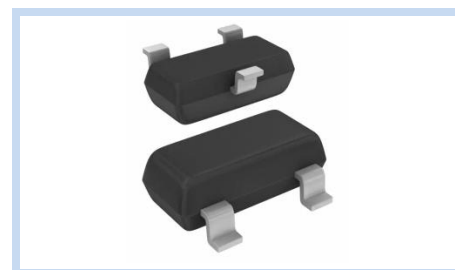
ESD Suppressor AEC-Q101 24V 2-Unidirectional SOT-23

ME242U43S23A

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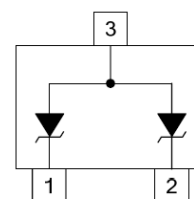
FEATURE

- IEC 61000-4-2 ESD: $\pm 15\text{KV}$ (Air) $\pm 8\text{KV}$ (Contact)
- ESD Protection for two Unidirectional Channels
- ESD Protection for one Bidirectional Channel
- Low Clamping Voltage
- Solid-State Silicon-Avalanche Technology
- AEC-Q101 Qualified



APPLICATION

- Cellular Handsets and Accessories
- Portable Devices
- Set-Top Box
- Notebooks, Desktops and Servers
- RS-232, RS-422, RS-423 Interfaces



MAXIMUM RATINGS AND CHARACTERISTICS

| Parameter | Symbol | Value | Unit |
|---------------------------------------|----------------|----------|--------------------|
| ESD Voltage (Contact discharge) | V_{ESD} | ± 8 | KV |
| ESD Voltage (Air discharge) | | ± 15 | |
| 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} | -- | -- | 24 | V |
| Reverse Breakdown Voltage | $I_{BR}=1\text{mA}$ | V_{BR} | 26.7 | -- | -- | V |
| Reverse Leakage Current | $V_R=24\text{V}$, Each I/O pin | I_R | -- | -- | 1 | μA |
| Clamping Voltage | $I_{PP}=1\text{A}$, $t_p=8/20\mu\text{s}$ | V_C | -- | -- | 43 | V |
| | $I_{PP}=5\text{A}$, $t_p=8/20\mu\text{s}$ | | -- | -- | 49 | |
| Off State Junction Capacitance | $V_{dc}=0$, $f=1\text{MHz}$, Between I/O pins and GND | C_J | -- | 80 | -- | pF |

Notes:

1. $T_A=25^{\circ}\text{C}$ unless otherwise specified

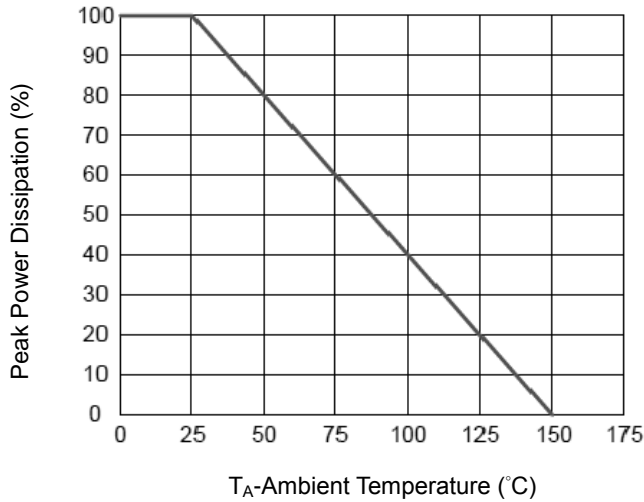
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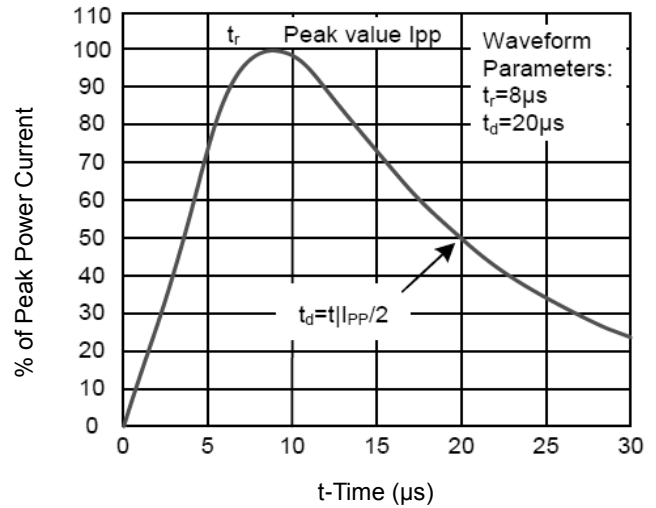
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CHARACTERISTIC CURVES

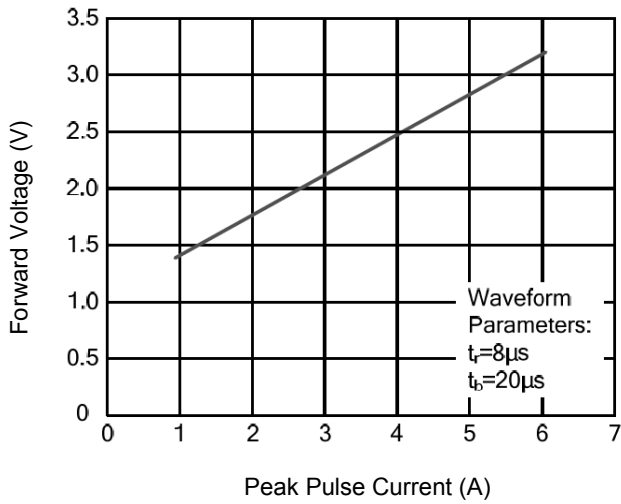
Power Derating Curve



Pulse Waveforms



Forward Voltage vs. Forward Current



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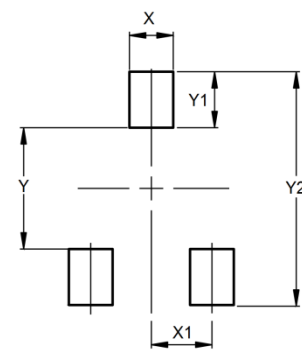
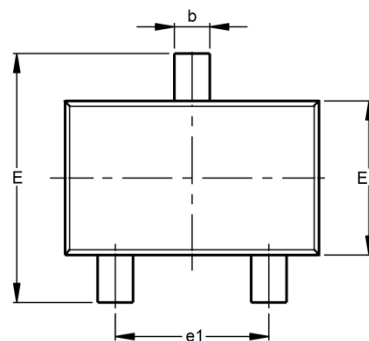
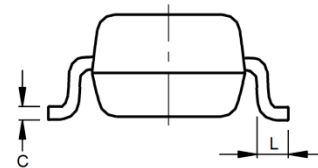
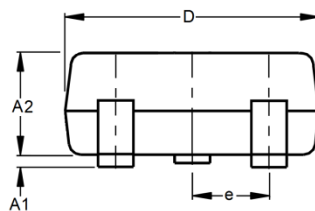
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DIMENSIONS AND RECOMMENDED LAND PATTERN

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| Item | Min (mm) | Max (mm) |
|------|----------|----------|
| A1 | 0.08 | 0.18 |
| A2 | 0.81 | 0.91 |
| b | 0.35 | 0.50 |
| C | -- | 0.13 |
| D | 2.80 | 3.05 |
| e | 0.95 | 0.95 |
| e1 | 1.90 | 1.90 |
| E | 2.10 | 2.49 |
| E1 | 1.19 | 1.40 |
| L | 0.15 | -- |
| X | 0.80 | 0.80 |
| X1 | 1.35 | 1.35 |
| Y | 2.00 | 2.00 |
| Y1 | 0.90 | 0.90 |
| Y2 | 2.90 | 2.90 |



*Specifications subject to change without notice.