

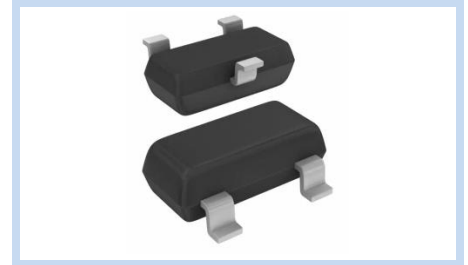
ESD Suppressor 15V 2-Unidirectional SOT-23

ME152U30S23

MERITEK

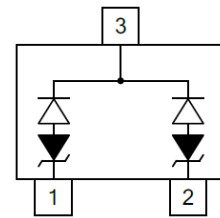
FEATURE

- IEC 61000-4-2 ESD: $\pm 15\text{KV}$ (Air) $\pm 8\text{KV}$ (Contact)
- ESD Protection for two Unidirectional Channels
- Ultra Low Capacitance: 0.8pF Typical
- Low Clamping Voltage
- Solid-State Silicon-Avalanche Technology



APPLICATION

- HDMI Interface Protection
- Display Port Interface
- Antenna Applications
- USB 2.0
- Gas 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 Power (tp=8/20 μ s) | P_{PP} | 400 | W |
| 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} | -- | -- | 15 | V |
| Reverse Breakdown Voltage | $I_{BR}=1\text{mA}$ | V_{BR} | 16.7 | -- | -- | V |
| Reverse Leakage Current | $V_R=15\text{V}$, Each I/O pin | I_R | -- | -- | 1 | μA |
| Clamping Voltage | $I_{PP}=1\text{A}$, tp=8/20 μ s | V_C | -- | -- | 30 | V |
| Off State Junction Capacitance | $V_{dc}=0$, f=1MHz, Between I/O pins and GND | C_J | -- | 0.8 | -- | pF |

Notes:

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

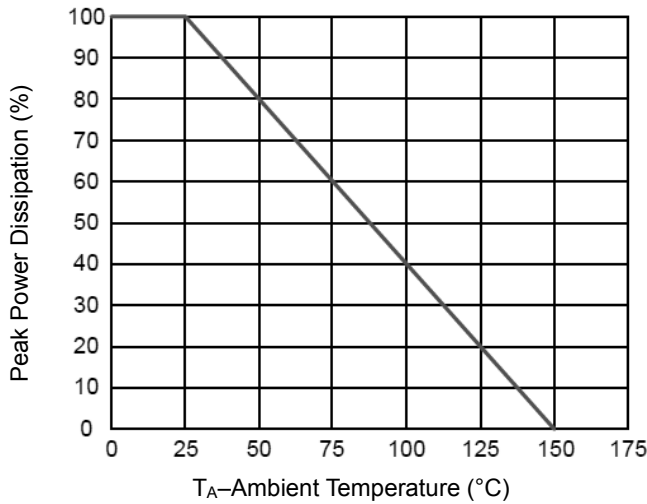
ESD Suppressor 15V 2-Unidirectional SOT-23

ME152U30S23

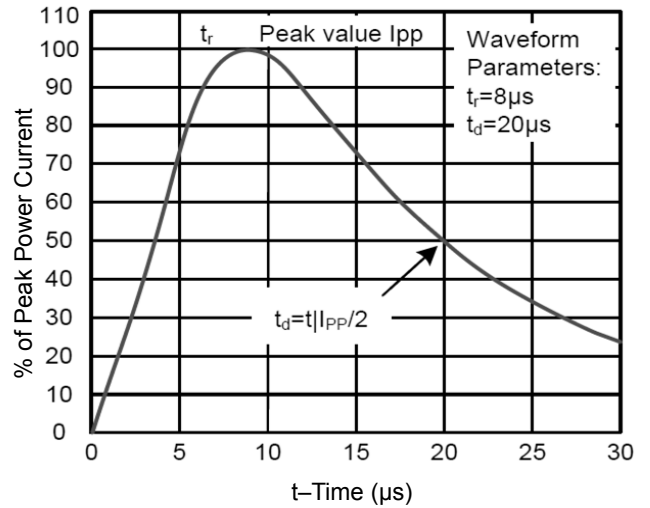
MERITEK

CHARACTERISTIC CURVES

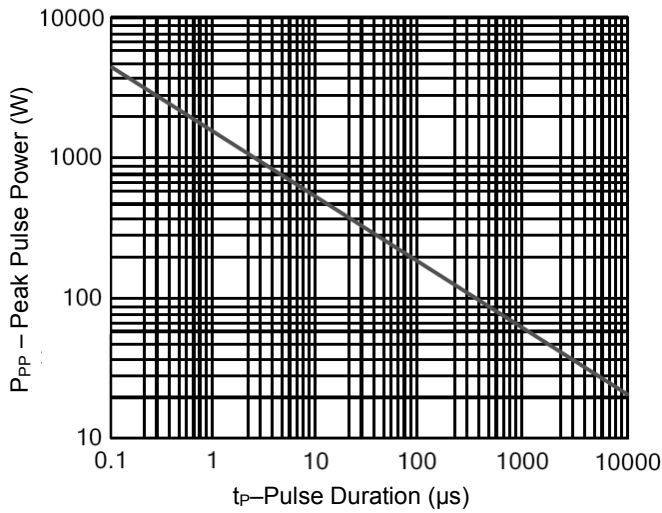
Power Derating Curve



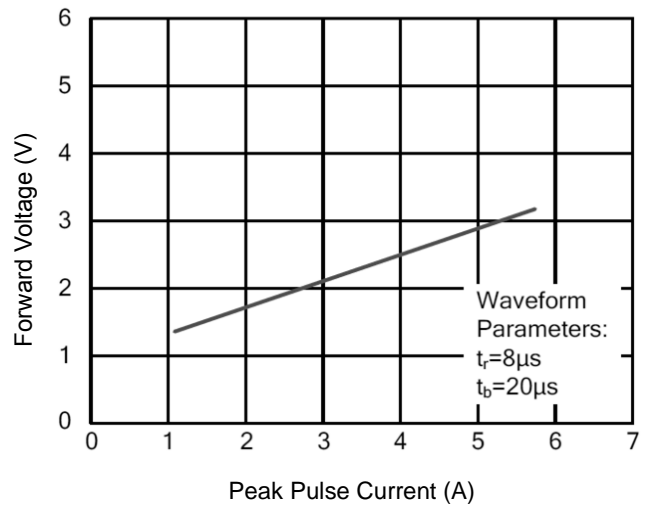
Pulse Waveforms



Non-Repetitive Peak Pulse vs. Pulse Time



Forward Voltage vs. Forward Current



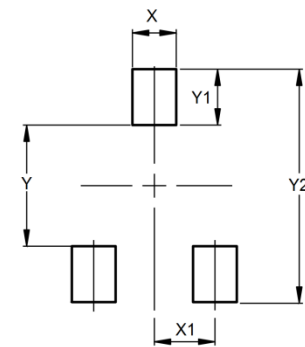
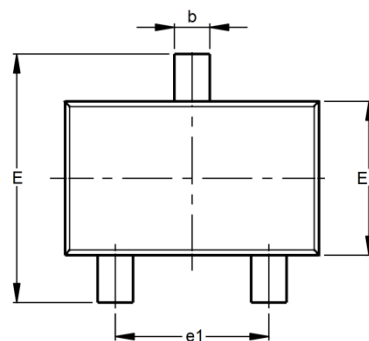
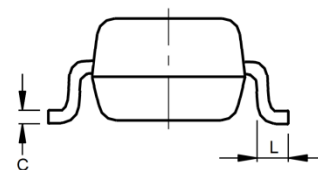
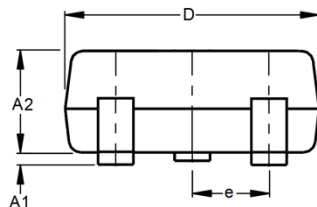
ESD Suppressor 15V 2-Unidirectional SOT-23

ME152U30S23

MERITEK

DIMENSIONS AND RECOMMENDED LAND PATTERN

| 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.