

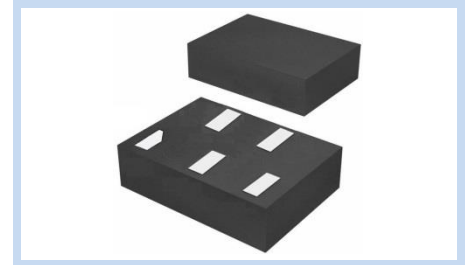
ESD Suppressor 5V 4-Unidirectional DFN2010

ME54U15D2010

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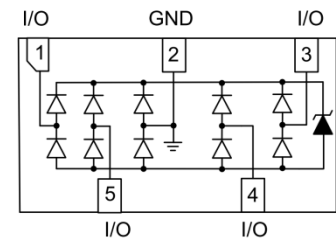
FEATURE

- IEC 61000-4-2 ESD: $\pm 10\text{KV}$ (Air) $\pm 10\text{KV}$ (Contact)
- ESD Protection for four Unidirectional Channels
- Low Capacitance
- Low Clamping Voltage
- Solid-State Silicon-Avalanche Technology



APPLICATION

- High Definition Multi-Media Interface (HDMI) 1.4 and 2.0 Version
- Display Port Interface
- USB 3.0/3.1 and Type C
- SATA Interface
- Desktops and Notebooks



MAXIMUM RATINGS AND CHARACTERISTICS

| Parameter | Symbol | Value | Unit |
|--|----------------|----------|--------------------|
| ESD Voltage (Contact discharge) | V_{ESD} | ± 10 | KV |
| ESD Voltage (Air discharge) | | ± 10 | |
| Peak Pulse Current ($t_p=8/20\mu s$) | I_{PP} | 2 | 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 | μA |
| Clamping Voltage | $I_{PP}=2\text{A}, t_p=8/20\mu s$ | V_C | -- | 15 | -- | V |
| Off State Junction Capacitance | $V_{dc}=0, f=1\text{MHz}$ | C_J | -- | -- | 0.4 | pF |

Notes:

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

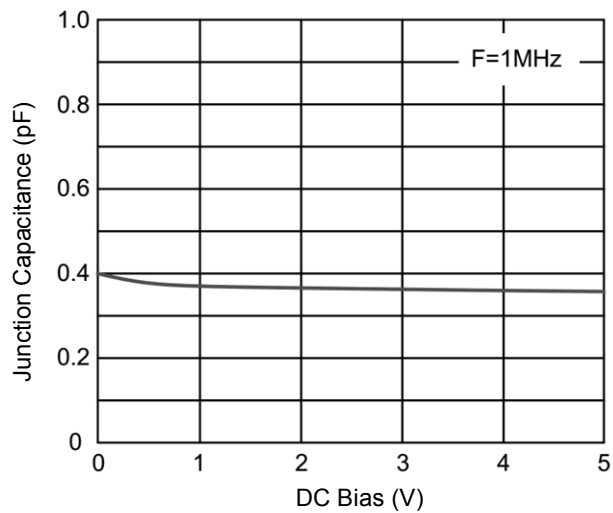
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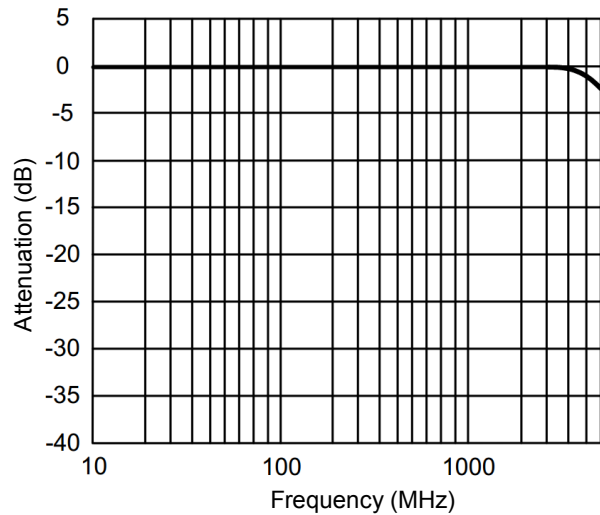
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CHARACTERISTIC CURVES

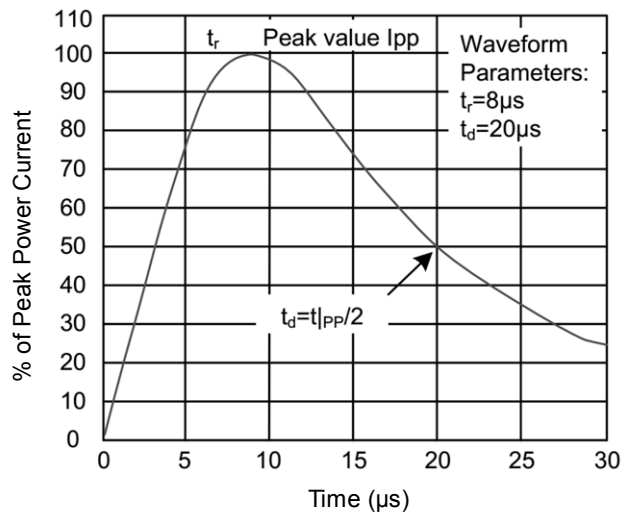
Capacitance vs. Bias Voltage



Insertion Loss (S21) I/O to GND



Pulse Waveform



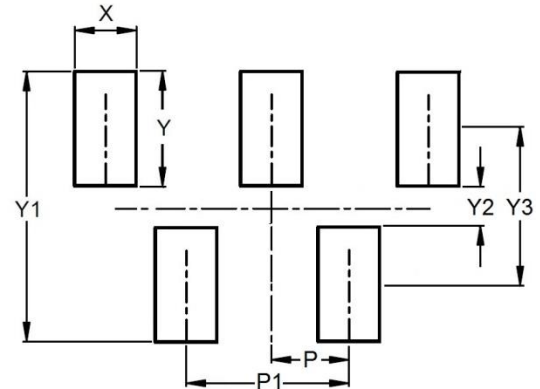
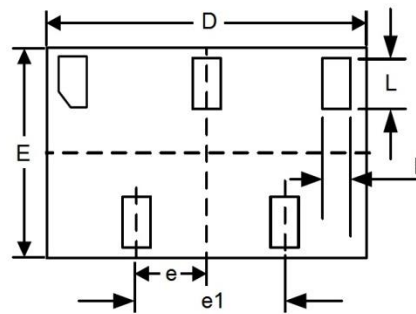
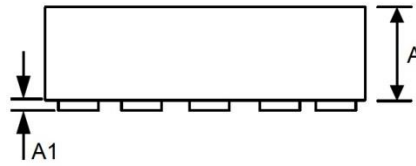
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DIMENSIONS AND RECOMMENDED LAND PATTERN

| Item | Min (mm) | Max (mm) |
|------|----------|----------|
| A | 0.45 | 0.55 |
| A1 | 0.00 | 0.05 |
| b | 0.15 | 0.20 |
| D | 1.95 | 2.05 |
| E | 0.95 | 1.05 |
| e | 0.40 | 0.40 |
| e1 | 0.80 | 0.80 |
| L | 0.25 | 0.35 |
| X | 0.20 | 0.20 |
| Y | 0.60 | 0.60 |
| Y1 | 1.45 | 1.45 |
| Y2 | 0.25 | 0.25 |
| Y3 | 0.85 | 0.85 |
| P | 0.40 | 0.40 |
| P1 | 0.80 | 0.80 |



*Specifications subject to change without notice.