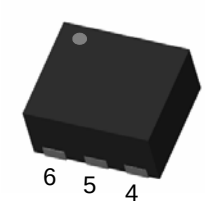
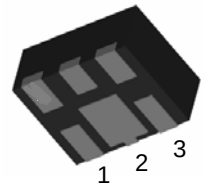
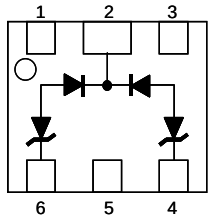
PRELIMINARY

# DUAL ULTRA LOW CAPACITANCE ESD PROTECTOR ARRAY

**This Dual Unidirectional ESD Protector Array family have been designed to protect sensitive equipment against ESD in high speed transmission buses, operating at 5V and demanding the lowest insertion loss. This array offers an integrated solution to protect up to 2 data lines in applications, where the board space is a premium, in a Quad Flat no-Lead package that only occupies an area of 1.8 sq mm.**




QFN 1.2x1.5 sq mm

## SPECIFICATION FEATURES

- **IEC61000-4-2 ESD 20kV air, 15kV Contact Compliance**
- **Low Leakage Current, Maximum of 1µA at rated voltage**
- **Maximum Capacitance of 1pF per device at 0Vdc 1MHz**
- **Peak Power Dissipation of 40W 8/20µs Waveform**
- **Quad Flat No Lead package QFN (1.2x1.5 sq mm, Height: 0.75mm)**
- **Lead Free Package 100% Tin Plating, Matte finish**

## APPLICATIONS

- **USB2.0 and IEEE 1394 Firewire Ports**
- **RF Power Amplifier Protection**
- **RF/Antenna Circuits**


## MAXIMUM RATINGS (Per Device)

| Rating | Symbol | Value | Units |
|---|---|---|---|
| Peak Pulse Power (8/20µs Waveform) | $P_{PP}$ | 40 | W |
| Peak Pulse Current (8/20µs Waveform) | $I_{PPM}$ | 3 | A |
| ESD Voltage (HBM Per MIL STD883C - Method 3015-6) | $V_{ESD}$ | 25 | kV |
| Operating Temperature Range | $T_J$ | -55 to +150 | °C |
| Storage Temperature Range | $T_{stg}$ | -55 to +150 | °C |

## ELECTRICAL CHARACTERISTICS (Per Device) Tj = 25°C

| Parameter | Symbol | Conditions | Min | Typical | Max | Units |
|---|---|---|---|---|---|---|
| Reverse Stand-Off Voltage | $V_{WRM}$ | | | | 5 | V |
| Reverse Breakdown Voltage | $V_{BR}$ | $I_{BR}$ =1mA | 6 | | | V |
| Reverse Leakage Current | $I_R$ | $V_R$ =5V | | | 1 | µA |
| Clamping Voltage (8/20µs) | $V_C$ | $I_{pp}$ =3A | | | 12 | V |
| Off State Junction Capacitance | Cj | 0 Vdc Bias f = 1MHz between 4&2 or 6&2 | | | 1 | pF |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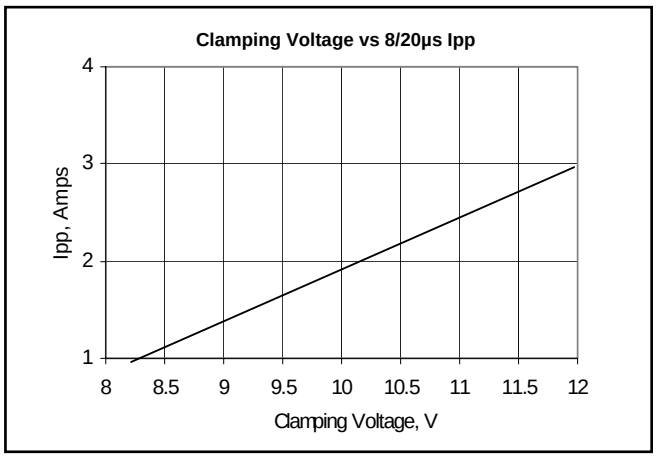
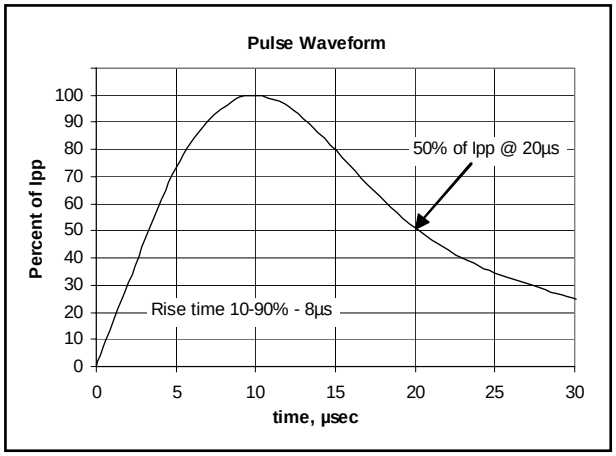
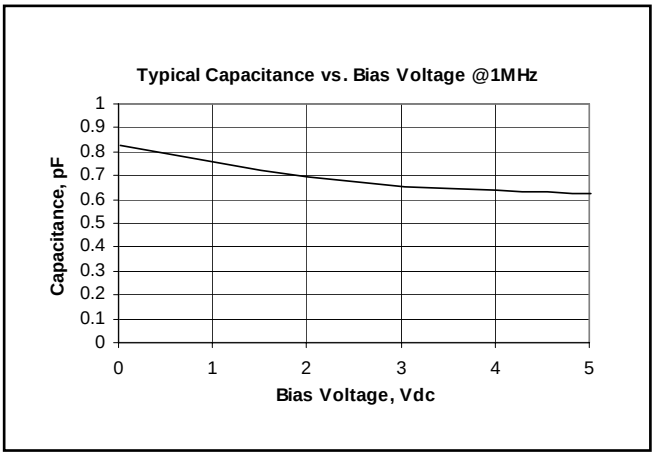
## TYPICAL CHARACTERISTIC CURVES (Per Device) Tj = 25°C



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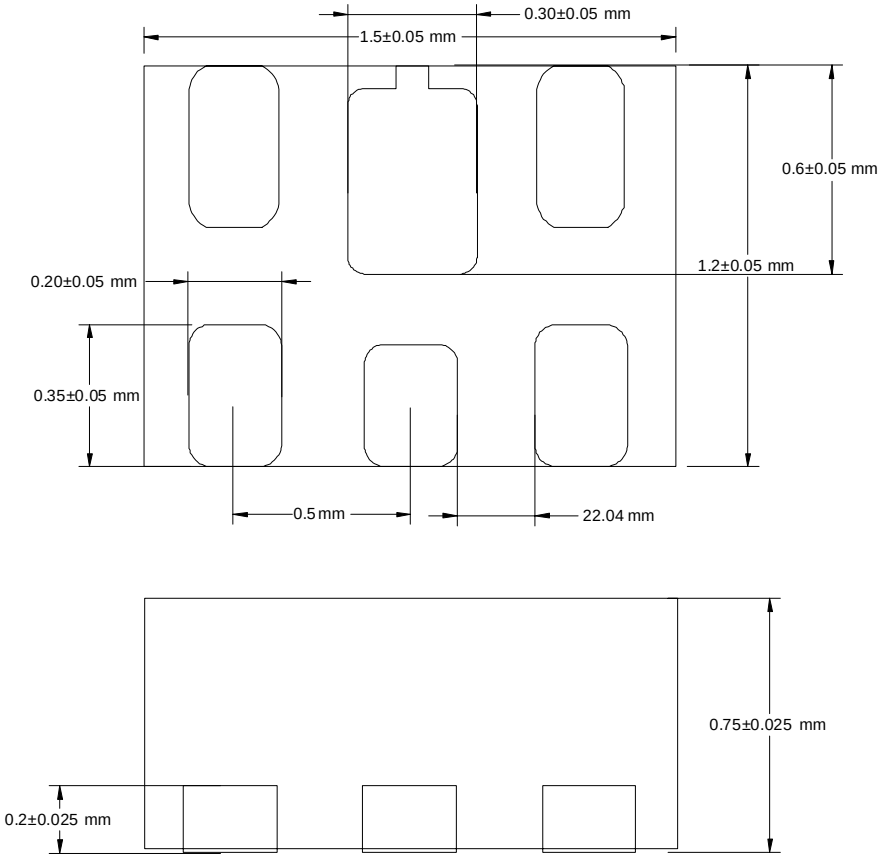
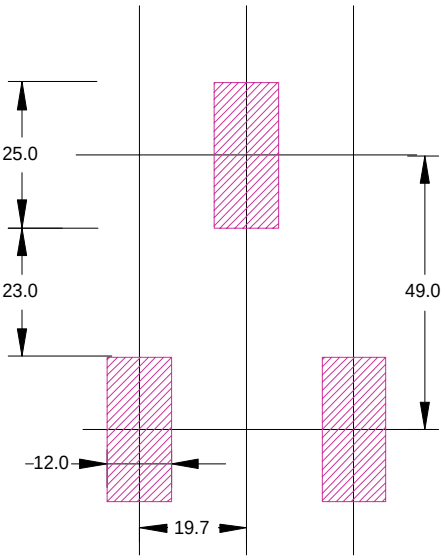
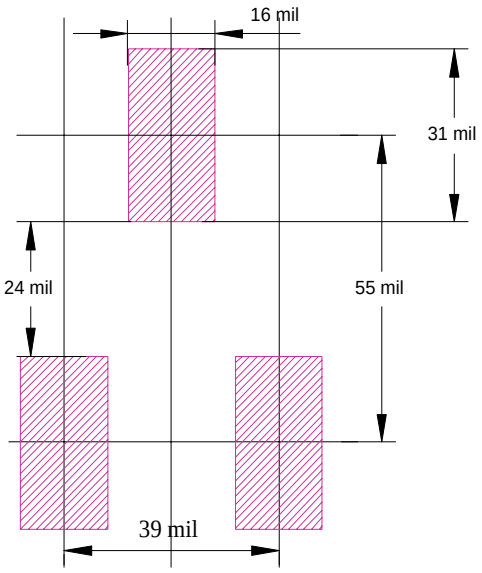
## PACKAGE DIMENSIONS AND SUGGESTED PAD LAYOUT




**Suggested Pad Layout (in mils)**




**Alternate Pad Layout SOT523 (in mils)**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