

## LOW CAPACITANCE TVS ARRAY

### APPLICATIONS

- ✓ Ethernet - 10/100/1000 Base T
- ✓ CAN Bus
- ✓ Cellular Phones
- ✓ Audio/Video Inputs
- ✓ Personal Digital Assistant (PDA)
- ✓ E1/T1 & E3/T3

### IEC COMPATIBILITY (EN61000-4)

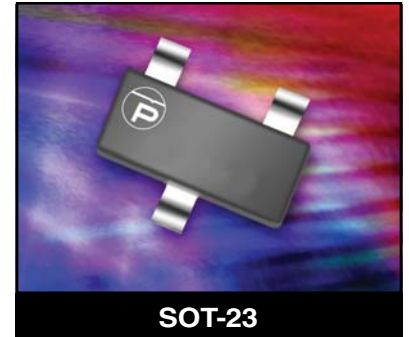
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns

### FEATURES

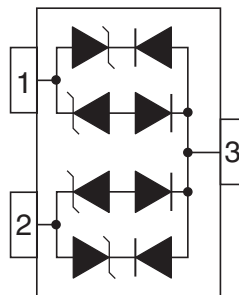
- ✓ ESD Protection > 25 kilovolts
- ✓ 100 Watts Peak Pulse Power per Line (tp=8/20µs)
- ✓ Protects Two (2) Bidirectional Lines
- ✓ Bidirectional Configuration
- ✓ Low Leakage Current < 1.0µA
- ✓ Low Capacitance: 6pF per Line
- ✓ RoHS Compliant

### MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SOT-23 Package
- ✓ Weight 8 milligrams (Approximate)
- ✓ Available in Lead-Free Pure-Tin Plating(Annealed)
- ✓ Solder Reflow Temperature:  
Pure-Tin - Sn, 100: 260-270°C
- ✓ Consult Factory for Leaded Device Availability
- ✓ Flammability Rating UL 94V-0
- ✓ 8mm Tape and Reel Per EIA Standard 481
- ✓ Marking: Marking Code



## PIN CONFIGURATION



# ESOT24LCC-2

## DEVICE CHARACTERISTICS

### MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

| PARAMETER   | SYMBOL    | VALUE      | UNITS |
|---|-----------|------------|-------|
| Peak Pulse Power ( $t_p = 8/20\mu s$ ) - See Figure 1 | $P_{PP}$  | 100        | Watts |
| Peak Pulse Current ( $t_p = 8/20\mu s$ )              | $I_{PP}$  | 2          | A     |
| Operating Temperature                                 | $T_A$     | -55 to 150 | °C    |
| Storage Temperature                                   | $T_{STG}$ | -55 to 150 | °C    |

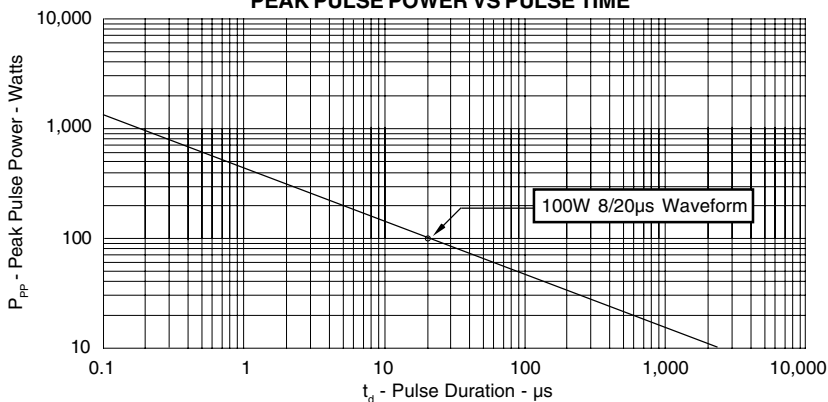
### ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

| PART NUMBER<br>(See Notes 1 & 2) | DEVICE MARKING CODE | RATED STAND-OFF VOLTAGE<br><br>$V_{WM}$<br>VOLTS | MINIMUM BREAKDOWN VOLTAGE<br><br>@ 1mA<br>$V_{(BR)}$<br>VOLTS | MAXIMUM LEAKAGE CURRENT<br><br>@ $V_{WM}$<br>$I_b$<br>$\mu A$ | TYPICAL CAPACITANCE<br><br>@ 0V, 1 MHz<br>C<br>pF |
|----------------------------------|---------------------|--|---|---|---|
| ESOT24LCC-2                      | 24L                 | 24.0   | 26.6  | 1   | 6   |

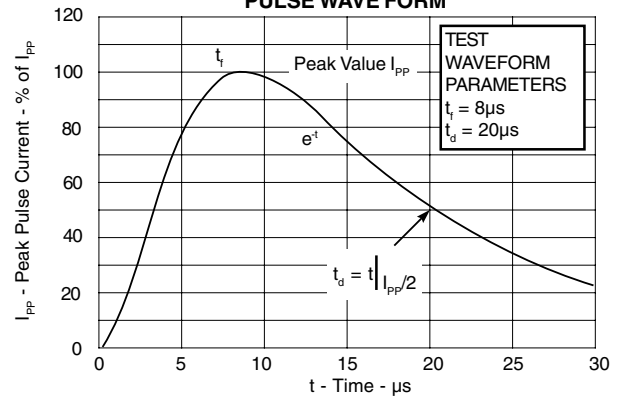
**Note 1:** Test between pins 1 to 3 and 2 to 3 in both directions.

**Note 2:** Per IEC 6100-4-2, ESD  $\pm 25kV$ .

**FIGURE 1**  
PEAK PULSE POWER VS PULSE TIME



**FIGURE 2**  
PULSE WAVE FORM



# ESOT24LCC-2

## SOT-23 PACKAGE OUTLINE & DIMENSIONS

### PACKAGE OUTLINE

### SOT-23

| PACKAGE DIMENSIONS |             |       |        |        |
|--------------------|-------------|-------|--------|--------|
| DIM                | MILLIMETERS |       | INCHES |        |
|                    | MIN         | MAX   | MIN    | MAX    |
| A                  | 2.80        | 3.04  | 0.1102 | 0.1197 |
| B                  | 1.20        | 1.40  | 0.0472 | 0.0551 |
| C                  | 0.89        | 1.11  | 0.0350 | 0.0440 |
| D                  | 0.37        | 0.50  | 0.0150 | 0.0200 |
| G                  | 1.78        | 2.04  | 0.0701 | 0.0807 |
| H                  | 0.013       | 0.100 | 0.0005 | 0.0040 |
| J                  | 0.085       | 0.177 | 0.0034 | 0.0070 |
| K                  | 0.45        | 0.60  | 0.0180 | 0.0236 |
| L                  | 0.89        | 1.02  | 0.0350 | 0.0401 |
| S                  | 2.10        | 2.50  | 0.0830 | 0.0984 |
| V                  | 0.45        | 0.60  | 0.0177 | 0.0236 |

### MOUNTING PAD

### NOTES

- Dimensioning and tolerances per ANSI Y14.5M, 1985.
- Controlling Dimension: Inches
- Pin 3 is the cathode (Unidirectional Only).
- Dimensions are exclusive of mold flash and metal burrs.

### TAPE & REEL ORDERING NOMENCLATURE

- Surface mount product is taped and reeled in accordance with EIA-481.
- Suffix-T7 = 7 Inch Reel - 3,000 pieces per 8mm tape, i.e., *ESOT24LCC-2-T7*.
- Suffix-T13 = 13 Inch Reel - 10,000 pieces per 8mm tape, i.e., *ESOT24LCC-2-T13*.
- Suffix - LF = Lead-Free, Pure-Tin Plating, i.e., *ESOT24LCC-2-LF-T7*.

**Outline & Dimensions: Rev 1 - 11/01, 06012**

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