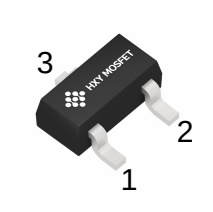
## Discription

The PSOT15C-LF-T7 protects sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events.

Excellent clamping capability, low leakage, low capacitance, and fast response time provide best in class protection on designs that are exposed to ESD.

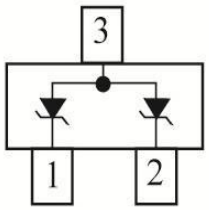
It gives designer the flexibility to protect 2 unidirectional line in applications where arrays are not practical.




**SOT-23**

## Features

- ★ Transient protection for high-speed data lines
  IEC 61000-4-2(ESD) ±30kV (Contact)
  ±30kV (Air)
  IEC 61000-4-4(EFT) 40A (5/50 ns)
- ★ Peak power dissipation: 350W (8/20us)
- ★ Working voltages : 15V
- ★ Protects one bidirectional line or two unidirectional lines
- ★ Low clamping voltage
- ★ Low leakage current




Circuit Diagram

## Ordering Information

| Product ID | Pack | Qty(PCS) |
|---|---|---|
| PSOT15C-LF-T7 | SOT-23 | 3000 |

## Absolute Ratings(Tamb = 25°C)

| Symbol | Parameter | Value | Units |
|---|---|---|---|
| $P_{PP}$ | Peak Pulse Power ($t_p$ = 8/20 μ s) | 350 | W |
| $T_L$ | Maximum lead temperature for soldering during 10s | 260 | °C |
| $T_{stg}$ | Storage Temperature Range | -55 to +155 | °C |
| $T_{op}$ | Operating Temperature Range | -40 to +125 | °C |
| $T_j$ | Maximum junction temperature | 150 | °C |
| | IEC61000-4-2 (ESD) air discharge<br>contact discharge | ±30<br>±30 | KV |
| | IEC61000-4-4 (EFT) | 40 | A |

## Electrical Characteristics

| Symbol | Parameter | Test Condition | Min | Typ | Max | Units |
|---|---|---|---|---|---|---|
| $V_{RWM}$ | Reverse Working Voltage | | | | 15 | V |
| $V_{BR}$ | Reverse Breakdown Voltage | $I_T$ = 1mA | 16.7 | | | V |
| $I_R$ | Reverse Leakage Current | $V_{RWM}$ = 15V | | | 1 | μA |
| $V_C$ | Clamping Voltage | $I_{PP}$ = 1A, $t_p$ = 8/20μs | | | 24 | V |
| | | $I_{PP}$ = 10A, $t_p$ = 8/20μs | | | 38 | V |
| $C_J$ | Junction Capacitance | $V_R$ = 0V, f = 1MHz | | 60 | 85 | pF |

## Typical Characteristics

Fig 1 8/20μs Waveform per IEC61000-4-5

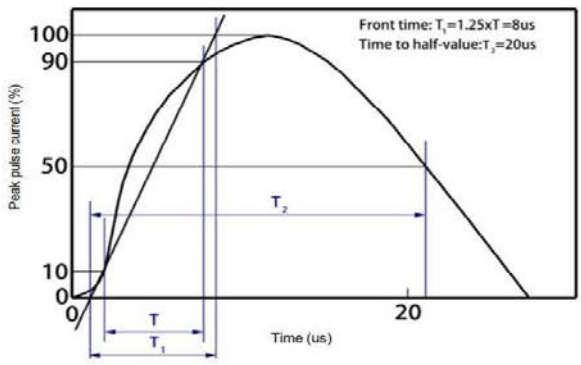
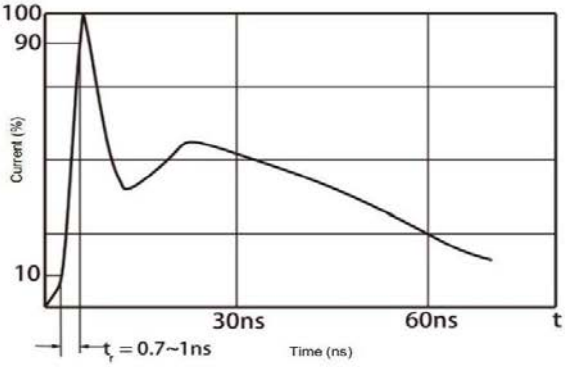
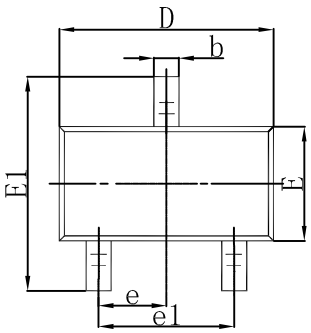
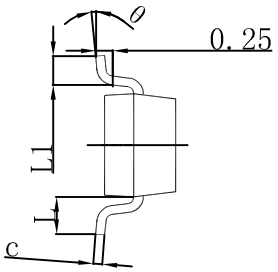


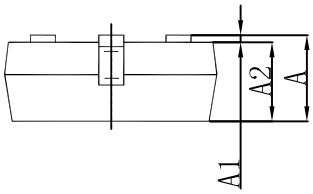

Fig 2 Contact Discharge Current Waveform per IEC 61000-4-2)



## SOT-23 Package Outline Dimensions

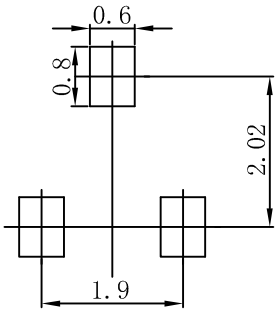



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|---|---|---|---|---|
| | Min | Max | Min | Max |
| A | 0.900 | 1.150 | 0.035 | 0.045 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.050 | 0.035 | 0.041 |
| b | 0.300 | 0.500 | 0.012 | 0.020 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 2.800 | 3.000 | 0.110 | 0.118 |
| E | 1.200 | 1.400 | 0.047 | 0.055 |
| E1 | 2.250 | 2.550 | 0.089 | 0.100 |
| e | 0.950 TYP | | 0.037 TYP | |
| e1 | 1.800 | 2.000 | 0.071 | 0.079 |
| L | 0.550 REF | | 0.022 REF | |
| L1 | 0.300 | 0.500 | 0.012 | 0.020 |
| θ | 0° | 8° | 0° | 8° |

## SOT-23 Suggested Pad Layout




Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

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