



## Discription

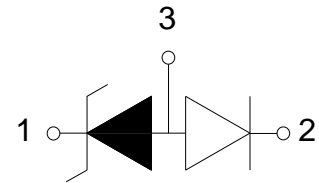
The HGL05T-E3-18 is an ultra-low capacitance TVS (Transient Voltage Suppressor) array designed to protect high speed data interfaces. It has been specifically designed to protect sensitive electronic components which are connected to data and transmission lines from over-stress caused by ESD(Electrostatic Discharge).



SOT-23

## Features

- ★ Transient protection for high-speed data lines  
IEC 61000-4-2(ESD)  $\pm 10\text{kV}$  (Contact)  
 $\pm 15\text{kV}$  (Air)  
IEC 61000-4-4(EFT) 40A (5/50 ns)
- ★ Peak power dissipation: 300W (8/20us)
- ★ Working voltages : 5V
- ★ Protecting one unidirectional lines
- ★ Low clamping voltage
- ★ Low leakage current



## Ordering information

| Product ID   | Pack   | Qty(PCS) |
|--------------|--------|----------|
| HGL05T-E3-18 | SOT-23 | 3000     |

## Absolute Ratings( $T_{amb} = 25^{\circ}\text{C}$ )

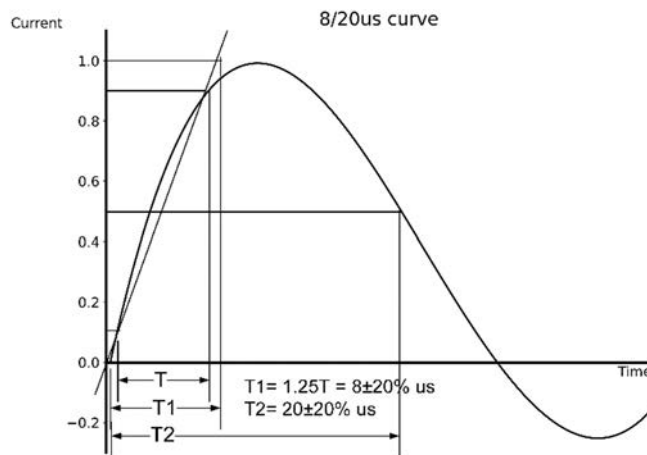
| Symbol    | Parameter   | Value                              | Units                |    |
|-----------|---|------------------------------------|----------------------|----|
| $P_{PP}$  | Peak Pulse Power ( $t_p = 8/20 \mu s$ )           | 300                                | W                    |    |
| $T_L$     | Maximum lead temperature for soldering during 10s | 260                                | $^{\circ}\text{C}$   |    |
| $T_{stg}$ | Storage Temperature Range                         | -55 to +155                        | $^{\circ}\text{C}$   |    |
| $T_{op}$  | Operating Temperature Range                       | -40 to +125                        | $^{\circ}\text{C}$   |    |
| $T_j$     | Maximum junction temperature                      | 150                                | $^{\circ}\text{C}$   |    |
|           | IEC61000-4-2 (ESD)                                | air discharge<br>contact discharge | $\pm 15$<br>$\pm 10$ | KV |
|           | IEC61000-4-4 (EFT)                                | 40                                 | A                    |    |



### Electrical Characteristics

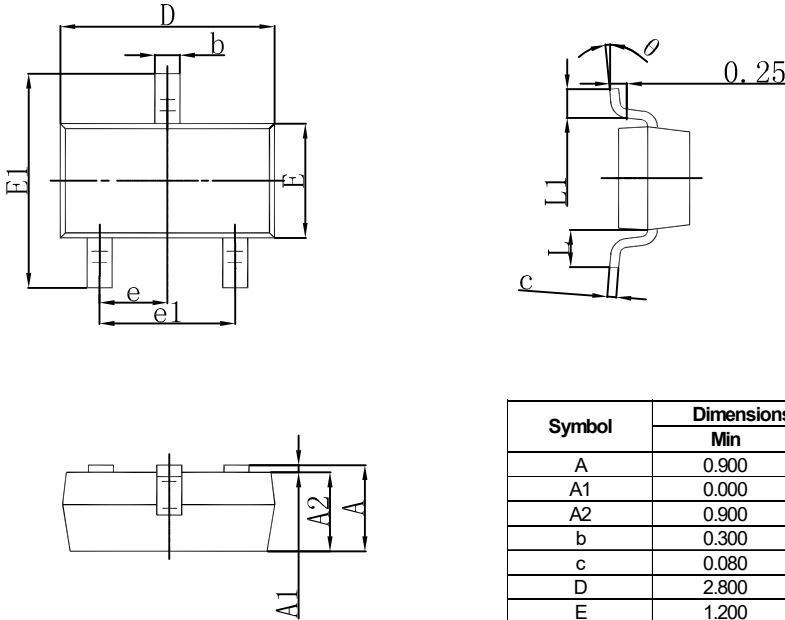
| Symbol    | Parameter                 | Test Condition                   | Min | Typ | Max | Units   |
|-----------|---------------------------|----------------------------------|-----|-----|-----|---------|
| $V_{RWM}$ | Reverse Working Voltage   |                                  |     |     | 5   | V       |
| $V_{BR}$  | Reverse Breakdown Voltage | $I_T = 1mA$                      | 6   |     |     | V       |
| $I_R$     | Reverse Leakage Current   | $V_{RWM} = 5V$                   |     |     | 1   | $\mu A$ |
| $V_C$     | Clamping Voltage          | $I_{RWM} = 1A, t_p = 8/20\mu s$  |     | 9.5 |     | V       |
|           |                           | $I_{RWM} = 15A, t_p = 8/20\mu s$ |     | 12  |     | V       |
| $C_J$     | Junction Capacitance      | $V_R = 0V, f = 1MHz$             |     | 1.5 |     | pF      |

### Typical Characteristics



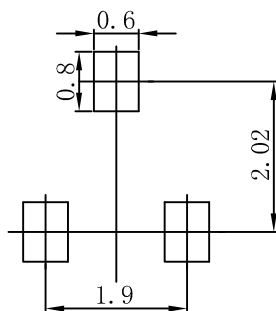


### SOT-23 Package Outline Dimensions



| 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:  $\pm 0.05\text{mm}$ .
  3. The pad layout is for reference purposes only.



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