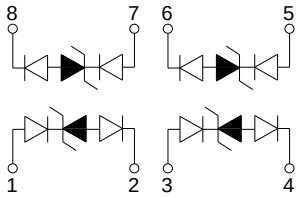
## Discription

The STSP84028UL65 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.


Pin 1

SOP-8




Circuit Diagram

## Features

- 550W peak pulse power (8/20μs)
- Protects two line pairs (four lines)
- Ultra low leakage: nA level
- Low operating voltage: 2.8V
- Very low capacitance:1pF
- Ultra low clamping voltage
- JEDEC SOP-8 package
- Complies with following standards:
  - – IEC 61000-4-2 (ESD) immunity test
    - Air discharge: ±30kV
    - Contact discharge: ±30kV
  - – IEC61000-4-5 (Lightning) 30A (8/20μs)
- RoHS Compliant

## Ordering Information

| Product ID | Pack | Qty(PCS) |
|---|---|---|
| STSP84028UL65 | SOP-8 | 3000 |

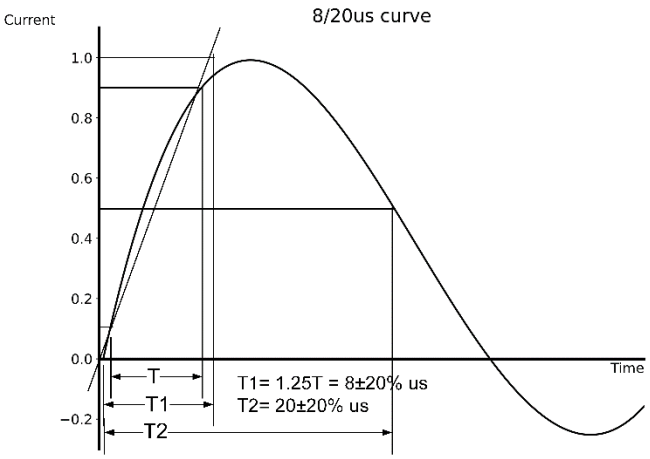
## Absolute Ratings(Tamb = 25°C)

| Symbol | Parameter | Value | Units |
|---|---|---|---|
| $P_{PP}$ | Peak Pulse Power ($t_p$ = 8/20 μ s) | 550 | W |
| $T_L$ | Maximum lead temperature for soldering during 10s | 260 | °C |
| $T_{stg}$ | Storage Temperature Range | -55 to +150 | °C |
| $T_{op}$ | Operating Temperature Range | -55 to +150 | °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 |

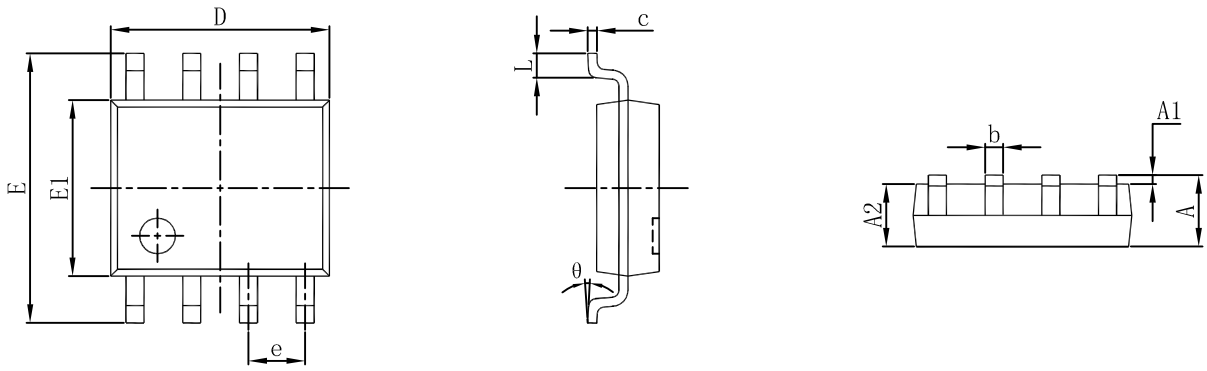
## Electrical Characteristics Ratings at 25°C

| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|---|---|---|---|---|---|---|
| Reverse Working Voltage | $V_{RWM}$ | | | 2.8 | V | |
| Breakdown Voltage | $V_{BR}$ | 3.0 | | | V | $I_T$ = 2μA |
| | $V_{SB}$ | 3.0 | | | V | $I_{SB}$= 50mA |
| Reverse Leakage Current | $I_R$ | | | 1 | μA | $V_{RWM}$ = 2.8V |
| Clamping Voltage | $V_C$ | | 6 | | V | $I_{PP}$ = 1A (8 x 20μs pulse) |
| Clamping Voltage | $V_C$ | | 16 | | V | $I_{PP}$ = 30A (8 x 20μs pulse) |
| Junction Capacitance | $C_J$ | | 1 | | pF | VR = 0V, f = 1MHz |

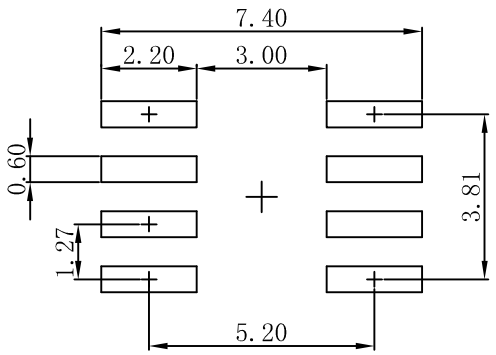
## Typical Characteristics



## SOP-8 Package Information




| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|---|---|---|---|---|
| | **Min** | **Max** | **Min** | **Max** |
| A | 1.350 | 1.750 | 0.053 | 0.069 |
| A1 | 0.100 | 0.250 | 0.004 | 0.010 |
| A2 | 1.350 | 1.550 | 0.053 | 0.061 |
| b | 0.330 | 0.510 | 0.013 | 0.020 |
| c | 0.170 | 0.250 | 0.007 | 0.010 |
| D | 4.800 | 5.000 | 0.189 | 0.197 |
| e | 1.270 (BSC) | | 0.050 (BSC) | |
| E | 5.800 | 6.200 | 0.228 | 0.244 |
| E1 | 3.800 | 4.000 | 0.150 | 0.157 |
| L | 0.400 | 1.270 | 0.016 | 0.050 |
| θ | 0° | 8° | 0° | 8° |




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

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