



## DFN2510-10L ESD Array SE05NRD34GU Working Voltage 5.0V For ESD Protection

Our Product Introduction

for more products please visit us on [socaydiode.com](http://socaydiode.com)

### Basic Information

- Place of Origin: Shenzhen Guangdong China
- Brand Name: SOCAY
- Certification: REACH RoHS ISO
- Model Number: SE05NRD34GU
- Minimum Order Quantity: 3000PCS
- Price: Negotiable
- Delivery Time: 5-8 work days



### Product Specification

- Component Name: ESD Arrays
- Component Package: DFN2510-10L
- Vrwm (Max.): 5.0V
- Vbr (Min.): 6.0V
- Ir (Max.): 1.0μA
- It: 1mA
- Vc (Typ.) (Ipp=1A): 10V
- Vc (Typ.) (Ipp=4A): 13V
- Cj (Typ.) Between I/O And GND: 0.6pF
- Cj (Typ.) Between I/O And I/O: 0.4pF
- Highlight: DFN2510-10L ESD Array , ESD Array 5.0V



### More Images



## Product Description

DFN2510-10L ESD Arrays SE05NRD34GU Working Voltage 5.0V For ESD Protection

**ESD Arrays DATASHEET:** [SE05NRD34GU\\_v2307.1.pdf](#)

### ESD Arrays Features:

Working voltage: 5.0V  
 Low capacitance: 0.60pF (Typical)  
 Low leakage current: 1.0 $\mu$ A @  $V_{RWM}$   
 Low clamping voltage  
 Response Time is < 1 ns

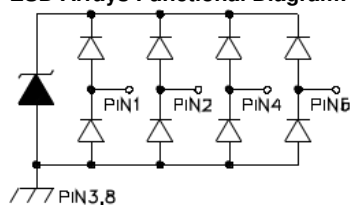
### ESD Arrays Applications:

USB 3.0, USB 2.0  
 HDMI 1.3/1.4, Display Port 1.3, eSATA  
 Unified Display Interface (UDI)  
 Digital Visual Interface (DVI)  
 High Speed Serial Interfaces

### ESD Arrays Mechanical Characteristics:

DFN2510-10L Package  
 Molding Compound Flammability Rating: UL 94V-0  
 Quantity Per Reel : 3,000pcs  
 Reel Size : 7 inch

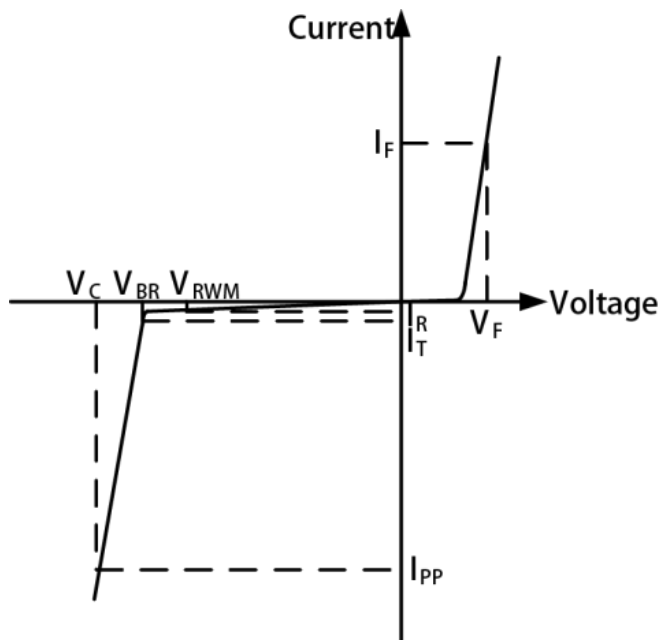
### ESD Arrays Functional Diagram:



### ESD Arrays Absolute Maximum Ratings ( $T_A=25$ unless otherwise specified):

| Symbol | Parameter                       | Value       | Units |
|--------|---------------------------------|-------------|-------|
| TLST   | Lead Soldering Temperature      | 260 (10sec) |       |
| TSTG   | Storage Temperature Range       | -55 to +150 |       |
| TOPT   | Operating Temperature Range     | -55 to +125 |       |
| VESD   | ESD per IEC 61000-4-2(Air)      | $\pm 20$    | KV    |
|        | ESD per IEC 61000-4-2 (Contact) | $\pm 15$    |       |
|        |                                 |             |       |

### I-V Curve Characteristics:



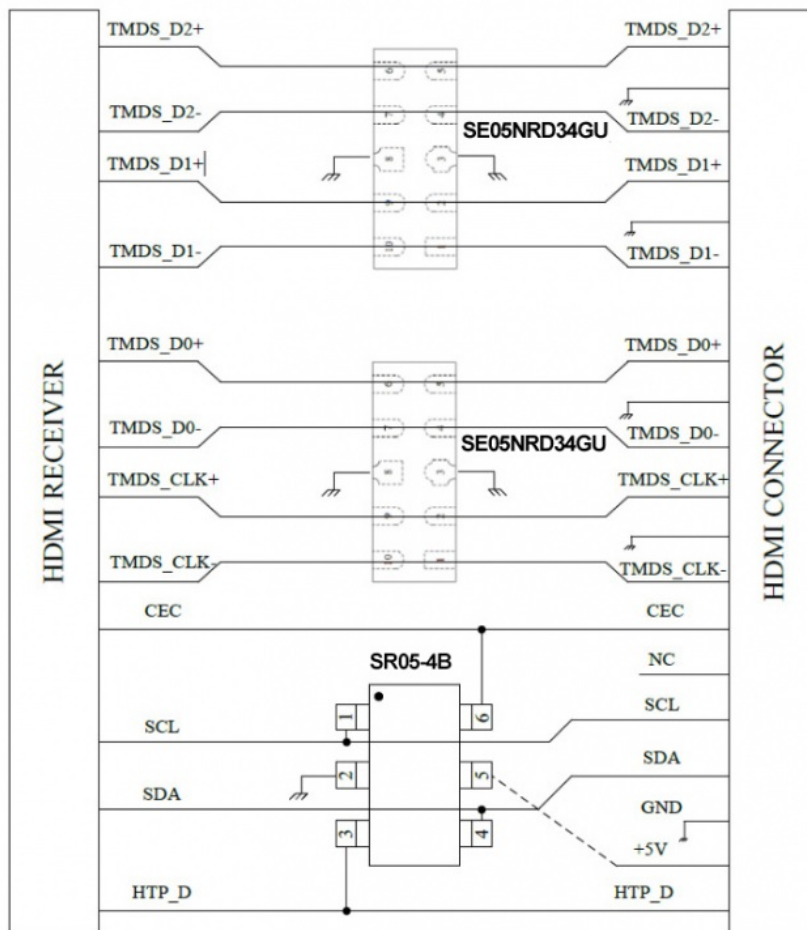
## Uni-Directional TVS

| Symbol           | Parameter                                          |
|------------------|----------------------------------------------------|
| I <sub>PP</sub>  | Maximum Reverse Peak Pulse Current                 |
| V <sub>C</sub>   | Clamping Voltage @ I <sub>PP</sub>                 |
| V <sub>RWM</sub> | Working Peak Reverse Voltage                       |
| I <sub>R</sub>   | Maximum Reverse Leakage Current @ V <sub>RWM</sub> |
| V <sub>BR</sub>  | Breakdown Voltage @ I <sub>T</sub>                 |
| I <sub>T</sub>   | Test Current                                       |
| I <sub>F</sub>   | Forward Current                                    |
| V <sub>F</sub>   | Forward Voltage @ I <sub>F</sub>                   |

### Electrical Characteristics (T<sub>A</sub> = 25 unless otherwise specified):

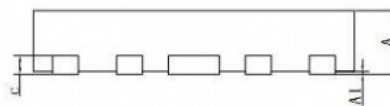
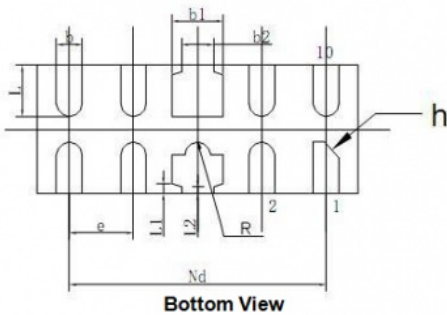
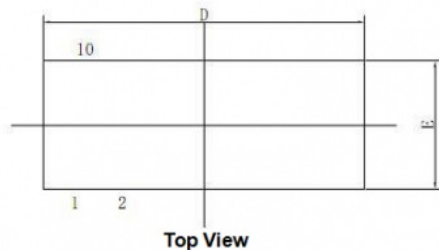
| Symbol           | Test Condition                                       | Minimum | Typical | Maximum | Units |
|------------------|------------------------------------------------------|---------|---------|---------|-------|
| V <sub>RWM</sub> | Any I/O pin to GND                                   | --      | --      | 5.0     | V     |
| I <sub>R</sub>   | V <sub>RWM</sub> =5V, T=25<br>Any I/O pin to GND     | --      | --      | 1.0     | μA    |
| V <sub>BR</sub>  | I <sub>T</sub> = 1mA<br>Any I/O pin to GND           | 6.0     | --      | --      | V     |
| V <sub>C</sub>   | I <sub>PP</sub> =1A, tp=8/20μs<br>Any I/O pin to GND | --      | 10      | --      | V     |
| V <sub>C</sub>   | I <sub>PP</sub> =4A, tp=8/20μs<br>Any I/O pin to GND | --      | 13      | --      | V     |
| C <sub>J</sub>   | V <sub>R</sub> =0V, f=1MHz<br>Between I/O and GND    | --      | 0.60    | --      | pF    |
| C <sub>J</sub>   | V <sub>R</sub> =0V, f=1MHz<br>Between I/O and I/O    | --      | 0.40    | --      | pF    |

### ESD Arrays Application Information:



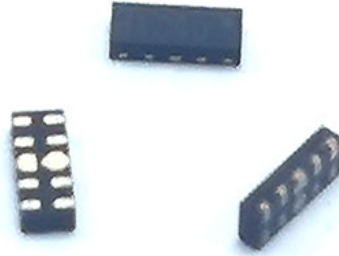
Layout Top View for HDMI Interface with SE05NRD34GU

#### DFN2510-10L Package Outline & Dimensions:



| Symbol | Dimensions In Millimeters |      |      |
|--------|---------------------------|------|------|
|        | Min.                      | Nom. | Max. |
| A      | 0.45                      | 0.50 | 0.55 |
| A1     | --                        | 0.02 | 0.05 |
| b      | 0.15                      | 0.20 | 0.25 |
| b1     | 0.35                      | 0.40 | 0.45 |
| b2     | 0.20                      | 0.25 | 0.30 |
| c      | 0.10                      | 0.15 | 0.20 |
| D      | 2.45                      | 2.50 | 2.55 |
| e      | 0.50 BSC                  |      |      |
| Nd     | 2.00 BSC                  |      |      |
| E      | 0.95                      | 1.00 | 1.05 |
| L      | 0.35                      | 0.40 | 0.45 |
| L1     | 0.075 REF                 |      |      |
| L2     | 0.050 REF                 |      |      |

|   |      |      |      |
|---|------|------|------|
| h | 0.08 | 0.12 | 0.15 |
| R | 0.05 | 0.10 | 0.15 |



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