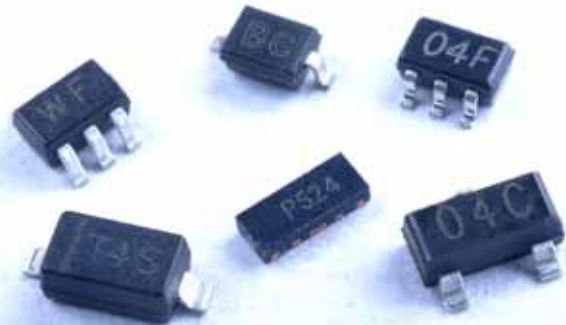


ELECTRONICS



# TVS/ESD Arrays

RLSD12AxxxC Series

## TVS/ESD Arrays - RLSD12AxxxC Series

### Features

- 350 Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Transient protection for data lines to  
IEC 61000-4-2 (ESD)  $\pm 15kV$  (air),  $\pm 8kV$  (contact)  
IEC 61000-4-4 (EFT) 40A (5/50ns)  
IEC 61000-4-5 (Lightning) 24A (8/20 $\mu s$ )
- Small package for use in portable electronics
- Suitable replacement for MLV's in ESD protection applications
- Protects one I/O or power line
- Solid-state silicon avalanche technology



### Mechanical Characteristics

- SOD-123 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel per EIA 481
- Lead Finish: Matte tin
- RoHS Compliant

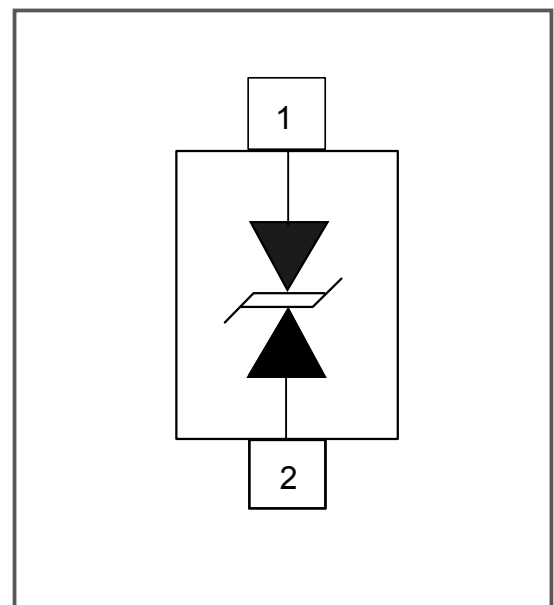
### Applications

- Personal digital assistants (PDA)
- Cellular handsets & Accessories
- Portable devices
- Portable instrumentation
- Handhelds and notebooks
- Digital cameras

### Life Support Note

- Not Intended for Use in Life Support or Life Saving Applications
- The products shown herein are not designed for use in life sustaining or life saving applications unless otherwise expressly indicated

### Pinout and Functional Block Diagram



## TVS/ESD Arrays - RLSD12AxxxC Series

## Absolute Maximum Rating

| Rating                                | Symbol           | Value       | Units |
|---------------------------------------|------------------|-------------|-------|
| Peak pulse power (tp=8/20μs waveform) | Ppk              | 200         | Watts |
| ESD voltage (HBM contact)             | V <sub>ESD</sub> | ±25         | Kv    |
| operating temperature range           | T <sub>J</sub>   | -55 to +125 | °C    |
| Storage temperature range             | T <sub>STG</sub> | -55 to +150 | °C    |

## Electrical Characteristics Per Lin (@ 25°C Unless Otherwise Specified)

| Type Number | Peak Power<br>Dissipation<br>@8/20μS<br>Pppm | Reverse<br>Stand-Off<br>Voltage | Peak Pulse<br>Voltage<br>@8/20μS | Peak Pulse<br>Current<br>@8/20μS | Reverse<br>Leakage<br>@Vrwm | Maximum<br>Capacitance<br>@1MHZ |
|-------------|--|---------------------------------|----------------------------------|----------------------------------|-----------------------------|---------------------------------|
|             |  | Vrwm                            | Vc@IPP                           | IPP                              | IR@Vrwm                     | Co                              |
|             |  | Max                             |                                  |                                  | Max                         | Max                             |
|             | W  | V                               | V                                | A                                | μA                          | pF                              |
| RLSD12A051C | 400  | 5                               | 7.5                              | 5                                | 20                          | 235                             |
| RLSD12A121C | 400  | 12                              | 14.5                             | 5                                | 1                           | 185                             |
| RLSD12A151C | 400  | 15                              | 19                               | 5                                | 1                           | 165                             |
| RLSD12A241C | 400  | 24                              | 29                               | 5                                | 1                           | 120                             |

# TVS/ESD Arrays - RLSD12AxxxC Series

## Typical Characteristics

Figure 1. Peak Pulse Power Rating Curve

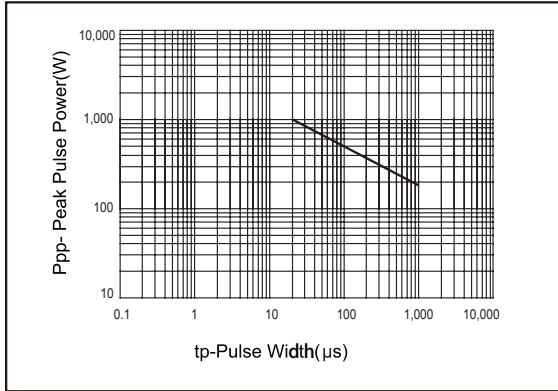


Figure 2. 10/1000µs Pulse Waveforms

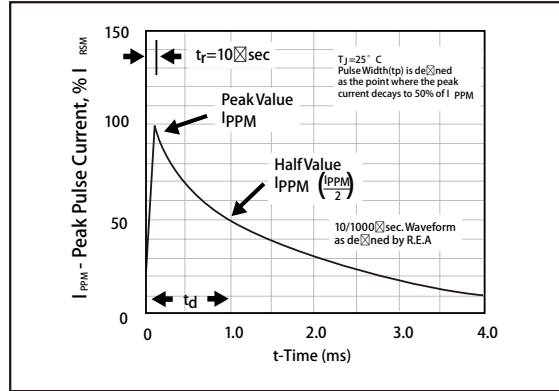


Figure 3. 8/20µs Pulse Waveforms

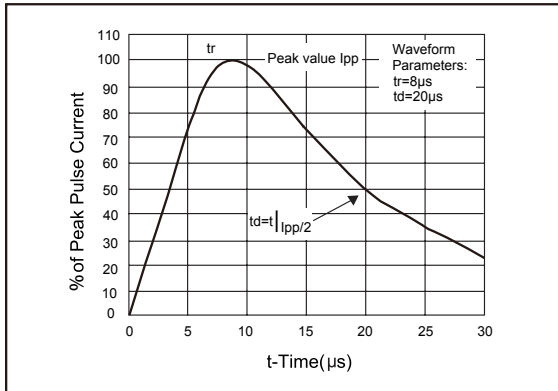


Figure 4. Power Derating Curve

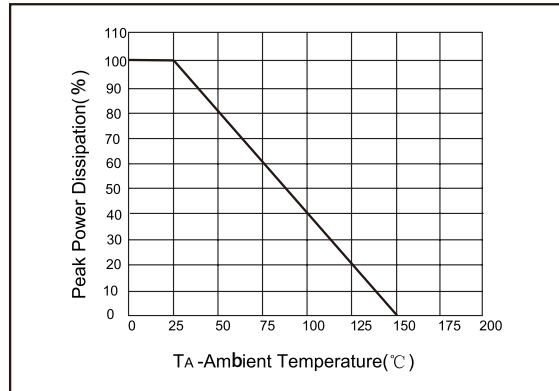
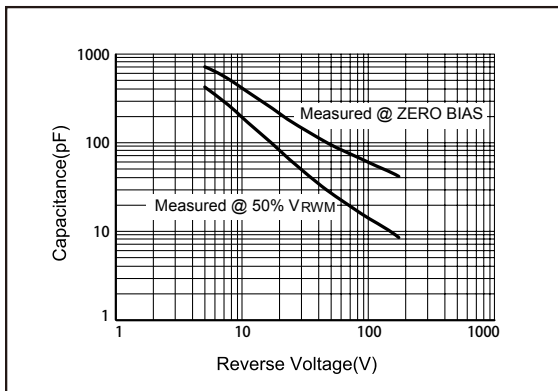
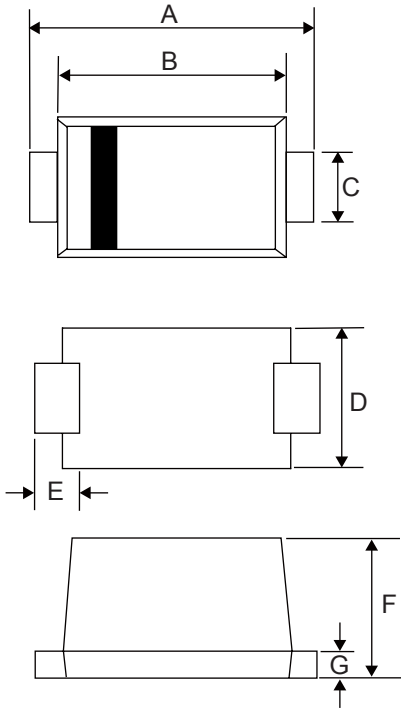


Figure 5. Capacitance vs. Reverse Voltage



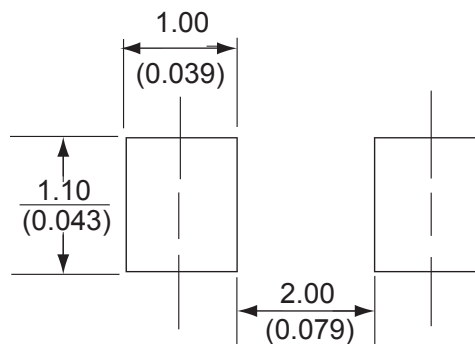
## TVS/ESD Arrays - RLSD12AxxxC Series

### Package dimension SOD-123



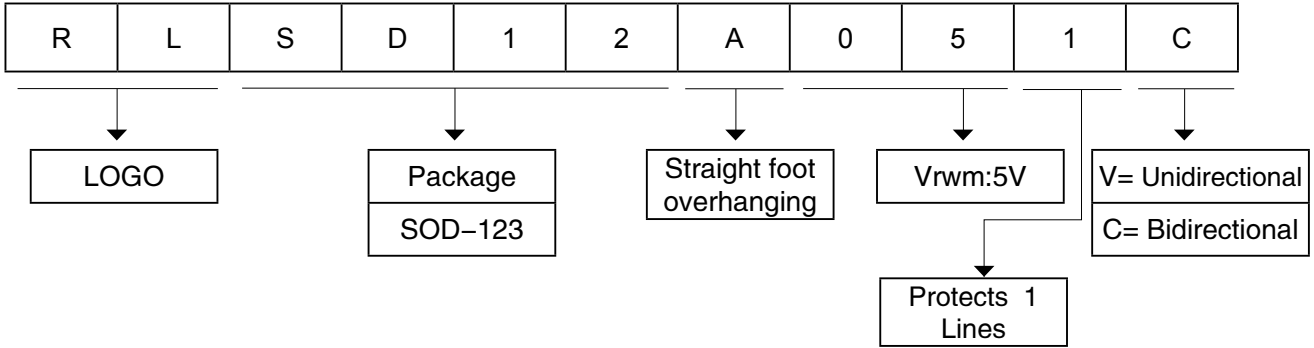
| Dimensions |          |       |             |      |
|------------|----------|-------|-------------|------|
| Symbol     | Inches   |       | Millimeters |      |
|            | Min      | Max   | Min         | Max  |
| A          | 0.138    | 0.154 | 3.50        | 3.90 |
| B          | 0.102    | 0.118 | 2.60        | 3.00 |
| C          | 0.030    | 0.037 | 0.75        | 0.95 |
| D          | 0.063    | 0.079 | 1.60        | 2.00 |
| E          | 0.031typ |       | 0.80typ     |      |
| F          | 0.035    | 0.039 | 0.90        | 1.05 |
| G          | 0.007    | 0.009 | 0.18        | 0.22 |

### Recommended soldering footprint

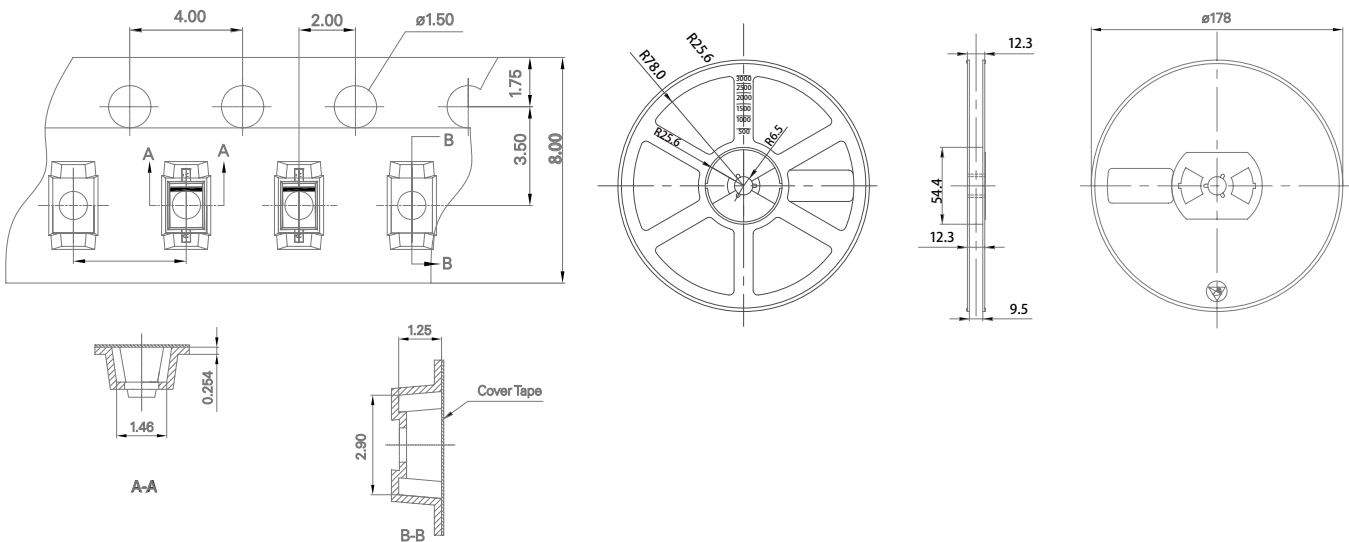


# TVS/ESD Arrays - RLSD12AxxxC Series

## Part Number Code



## Tape and reel



## Ordering Information

| Part Number | Package | Min. Order Qty. |
|-------------|---------|-----------------|
| RLSD12AxxxC | SOD-123 | 3000pcs         |

## Warehouse Storage Conditions of Products

- Storage Conditions:
- 1. Storage Temperature: -10°C~+40°C
- 2. Relative Humidity: ≤75%RH
- 3. Keep away from corrosive atmosphere and sunlight.
- 4. Period of Storage: 1 year

## RuiLongYuan Electronics Co., Ltd.

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