

# TVS/ESD Arrays

RLSD52A Series

## TVS/ESD Arrays - RLSD52A Series

### Features

- Transient protection for data lines to IEC 61000-4-2 (ESD)  $\pm 30\text{kV}$  (air),  $\pm 15\text{kV}$  (contact)  
IEC 61000-4-4 (EFT) 40A (tp = 5/50ns)  
Cable Discharge Event (CDE)
- Ultra-small SOD-523 package (1.7 x 0.9 x 0.7mm)
- Protects one I/O or power line
- Low clamping voltage
- Working voltage
- Low leakage current
- Solid-state silicon-avalanche technology



### Mechanical Characteristics

- SOD-523 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel per EIA 481
- Lead Finish: Matte tin
- RoHS Compliant

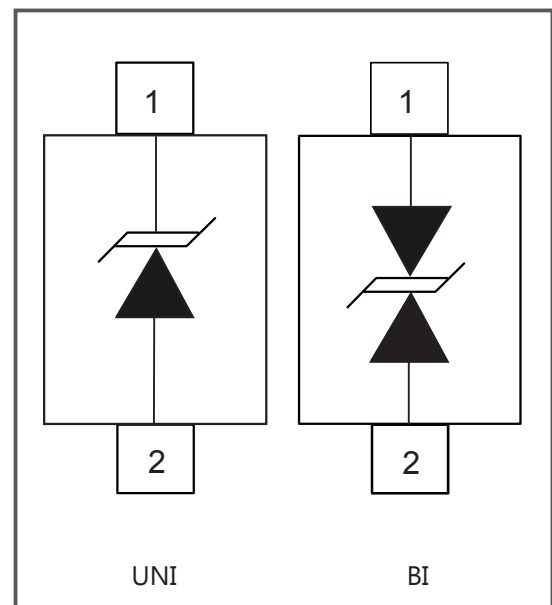
### Applications

- Switches / Buttons
- Test Equipment /Instrumentation
- Point-of-Sale Terminals
- Medical Equipment
- Notebooks / Desktops /Servers
- Computer Peripherals

### 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 - RLSD52A Series

### Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power (tp = 8/20µs)	P <sub>pk</sub>	200	Watts
Maximum Peak Pulse Current (tp = 8/20µs)	I <sub>pp</sub>	8	Amps
ESD per IEC 61000-4-2 (Air)	V <sub>pp</sub>	+/-30	Kv
ESD per IEC 61000-4-2 (Contact)	V <sub>pp</sub>	+/-15	Kv
Lead Soldering Temperature	T <sub>L</sub>	260 (10 sec.)	°C
Operating Temperature	T <sub>J</sub>	-55 to +125	°C
Storage Temperature	T <sub>STG</sub>	-55 to +150	°C

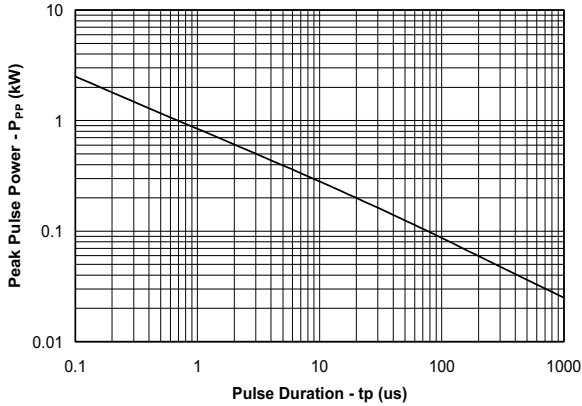
### Electrical Characteristics Per Lin (@ 25°C Unless Otherwise Specified)

Type Number		Peak Power Dissipation @8/20µS Pppm	Reverse Stand-Off Voltage	Peak Pulse Voltage @8/20µS Pppm	Peak Pulse Current @8/20µS Pppm	Reverse Leakage @Vrwm	Maximum Capacitance @1MHZ	
			Vrwm	Vc@IPP	IPP	IR@Vrwm	Co	
			Max			Max	Max	
UNI	BI	W	V	V	A	µA	UNI(pF)	BI(pF)
RLSD52A031V	RLSD52A031C	200	3.3	6.5	5	1	200	100
RLSD52A051V	RLSD52A051C	200	5	9	5	1	110	55
RLSD52A061V	RLSD52A061C	200	6	10	5	1	80	40
RLSD52A081V	RLSD52A081C	200	8	15	5	1	70	35
RLSD52A121V	RLSD52A121C	200	12	17	5	1	60	30
RLSD52A151V	RLSD52A151C	200	15	22	5	1	50	25
RLSD52A181V	RLSD52A181C	200	18	28	5	1	40	20
RLSD52A241V	RLSD52A241C	200	24	32	3	1	25	12
RLSD52A361V	RLSD52A361C	200	36	55	1	1	20	10

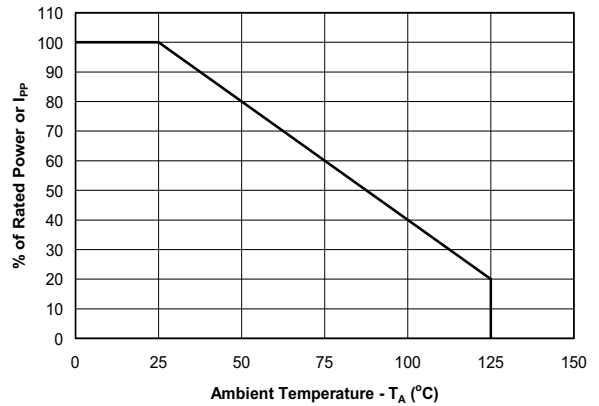
## TVS/ESD Arrays - RLSD52A Series

### Typical Characteristics

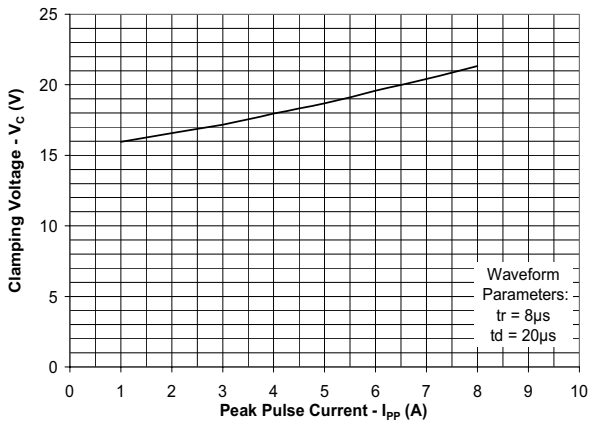
Non-Repetitive Peak Pulse Power vs. Pulse Time



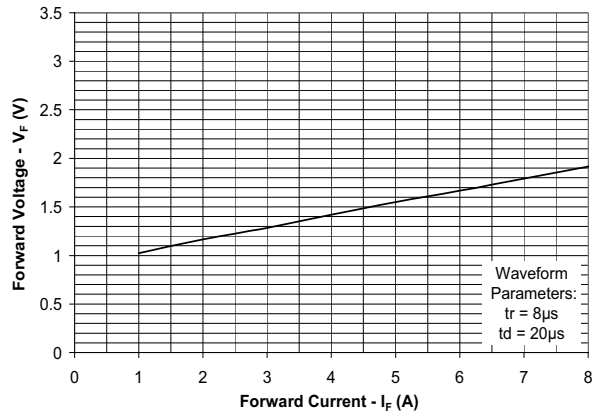
Power Derating Curve



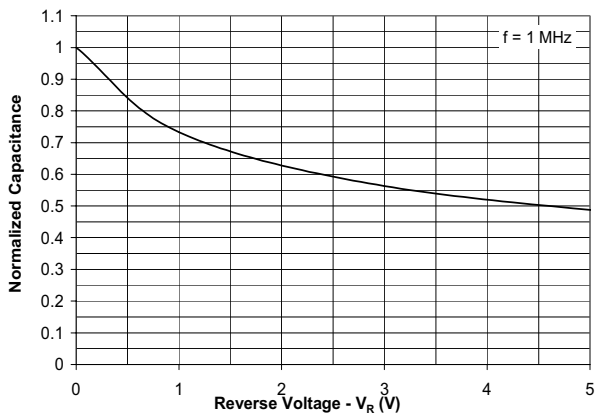
Clamping Voltage vs. Peak Pulse Current



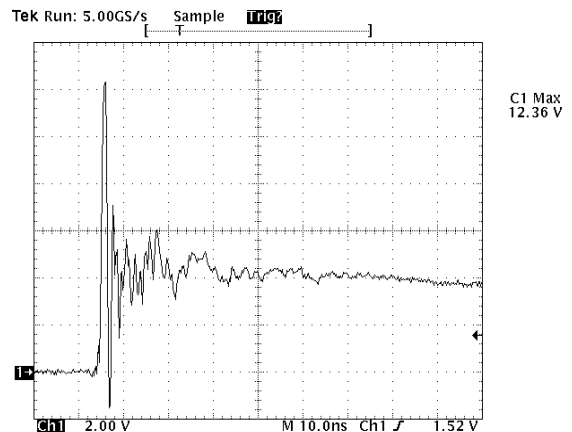
Forward Voltage vs. Forward Current



Junction Capacitance vs. Reverse Voltage

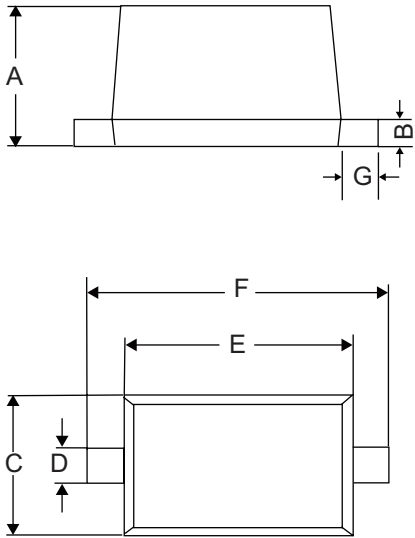


ESD Clamping  
(8kV Contact per IEC 61000-4-2)



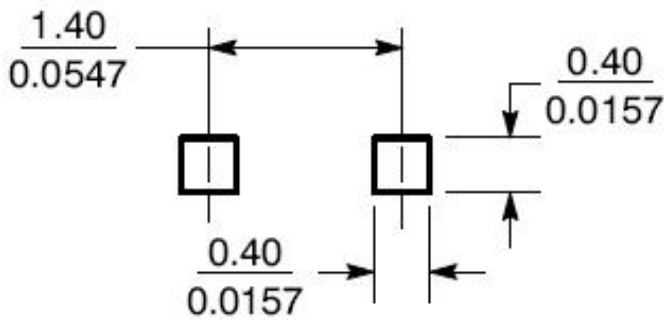
## TVS/ESD Arrays - RLSD52A Series

### Package dimension SOD-523



Symbol	Dimensions					
	Inches			Millimeters		
	Min	Nom	Max	Min	Nom	Max
A	0.020	0.024	0.028	0.50	0.60	0.70
B	0.003	0.006	0.008	0.07	0.14	0.20
C	0.028	0.031	0.035	0.70	0.80	0.90
D	0.010	0.012	0.014	0.25	0.30	0.35
E	0.043	0.047	0.051	1.10	1.20	1.30
F	0.059	0.063	0.067	1.50	1.60	1.70
G	0.006	0.008	0.010	0.15	0.20	0.25

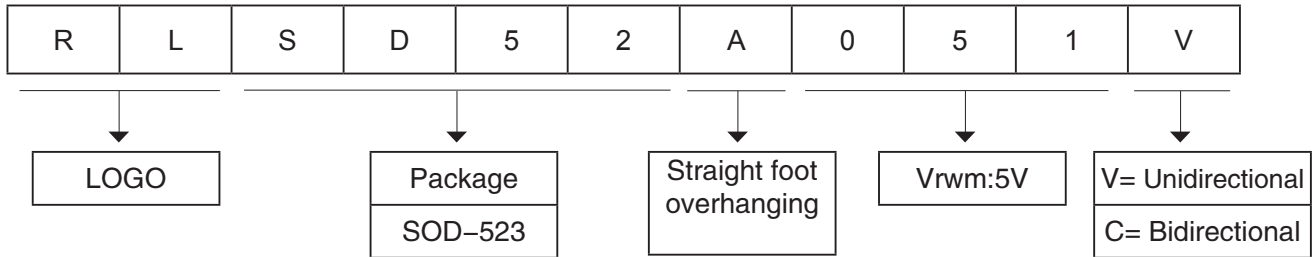
### Soldering footprint



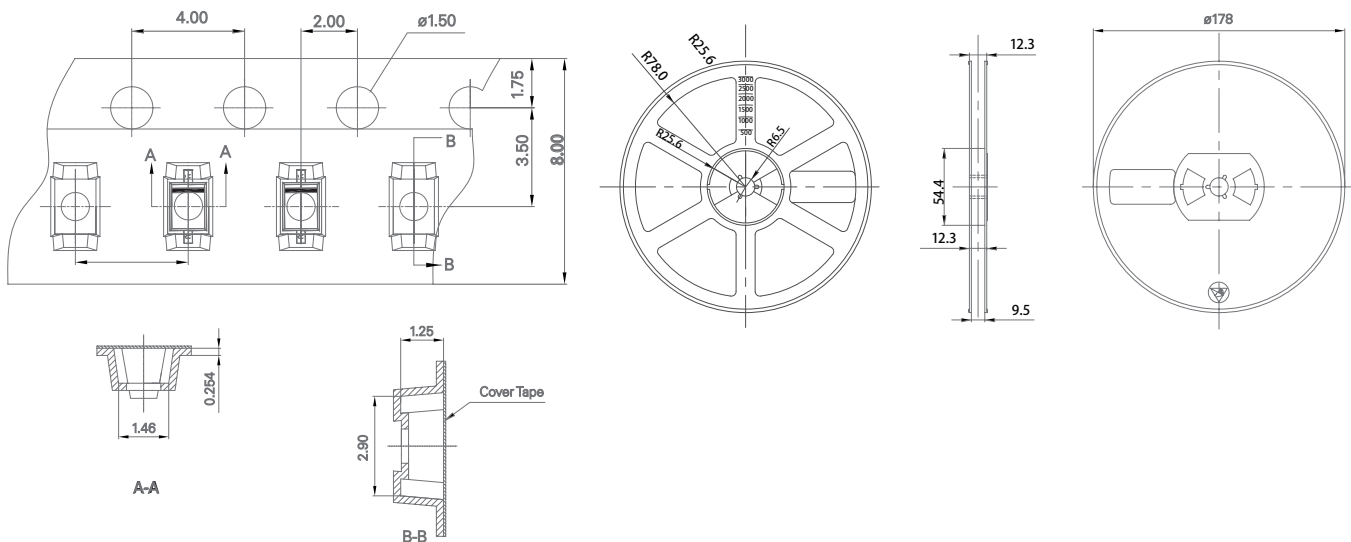
SCALE 10:1  $\left(\frac{\text{mm}}{\text{inches}}\right)$

## TVS/ESD Arrays - RLSD52A Series

### Part Number Code



### Ordering Information



### Ordering Information

Part Number	Package	Min. Order Qty.
RLSD52A	SOD-523	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.
- Period of Storage: 1 year

## RuiLongYuan Electronics Co., Ltd.

---

- Reproducing and modifying information of the document is prohibited without permission from Ruilongyuan International Inc.
- Ruilongyuan International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Ruilongyuan International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Ruilongyuan International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Ruilongyuan International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Ruilongyuan International Inc. for any damages resulting from such improper use or sale.

---

**Tel: +86-755-8290 8296**

**Fax: +86-755-8290 8002**

**E-mail: [jack@ruilon.com](mailto:jack@ruilon.com)**