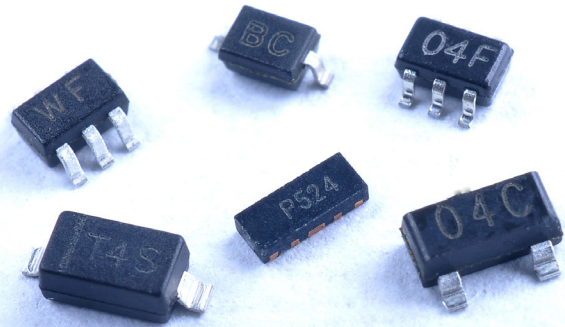


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# TVS/ESD Arrays

RLSD92A051LC Series

**361°** Circuit Protection  
System

Revision:DEC-16

Please refer to <http://www.ruilon.com.cn> for current information.

## TVS/ESD Arrays - RLSD92A051LC Series

### Features

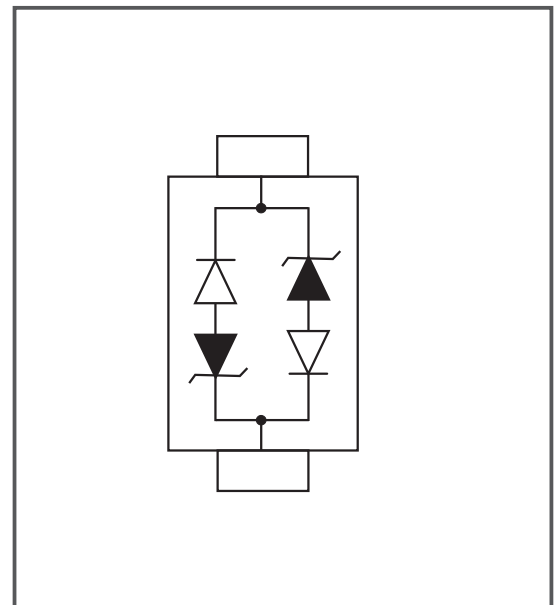
- 150 Watts Peak Pulse Power per Line (tp = 8/20µs)
- Working voltages: 5V
- Low Leakage Current
- Low operating and clamping voltages
- Lead Free/RoHS compliant
- Solid-state silicon avalanche technology
- Provides ESD protection to IEC61000-4-2(ESD):
  - ±15kV (air discharge)
  - ±8kV (contact discharge)



### Mechanical Characteristics

- SOD-923 package
- Molding compound flammability rating: UL 94V-0
- Quantity Per Reel : 8,000pcs
- Reel Size : 7 inch
- Lead Finish : Lead Free

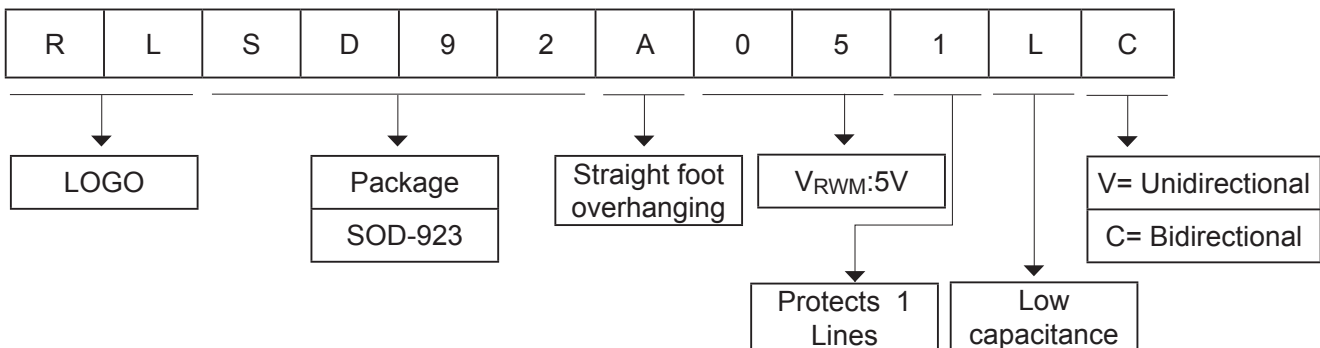
### Pinout and Functional Block Diagram



### Applications

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Pagers Peripherals

### Part Number Code



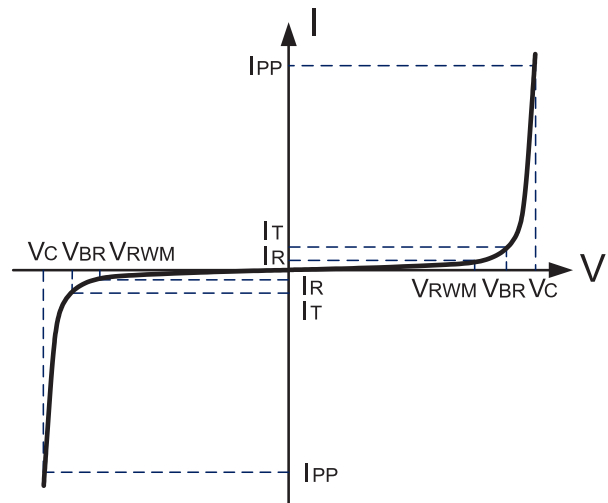
## TVS/ESD Arrays - RLSD92A051LC Series

### Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power (tp =8/20μs)	P <sub>pk</sub>	150	Watts
ESD Voltage (Contact)	V <sub>ESD</sub>	±8	Kv
ESD Voltage (Air)	V <sub>ESD</sub>	±15	Kv
IEC61000-4-4(EFT)	-	40	A
Lead Sold	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 Parameters (T=25°C)

Symbol	Parameter
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(@ 25°C Unless Otherwise Specified)

Type Number	Reverse Stand-Off Voltage	Minimum Breakdown Voltage	Peak Pulse Voltage @8/20μS	Peak Pulse Current @8/20μS	Reverse Leakage @V <sub>RWM</sub>	Typical Capacitance
	V <sub>RWM</sub>	V <sub>BR@1mA</sub>	V <sub>C@1A</sub>	I <sub>PP</sub>	I <sub>R@V<sub>RWM</sub></sub>	C <sub>J@ 1 MHz</sub>
	V	V	V	A	μA	pF
RLSD92A051LC	5.0	6.0	9.8	1.0	1.0	0.7

## TVS/ESD Arrays - RLSD92A051LC Series

### Typical Characteristics

Fig1. 8/20μs Pulse Waveform

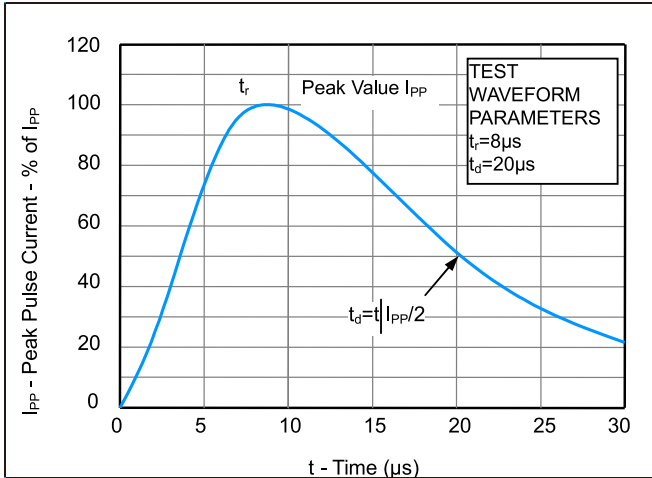


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

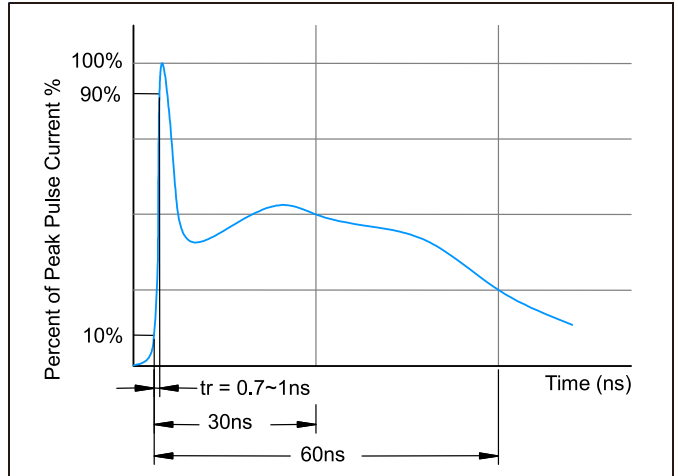


Fig3. Power Derating Curve

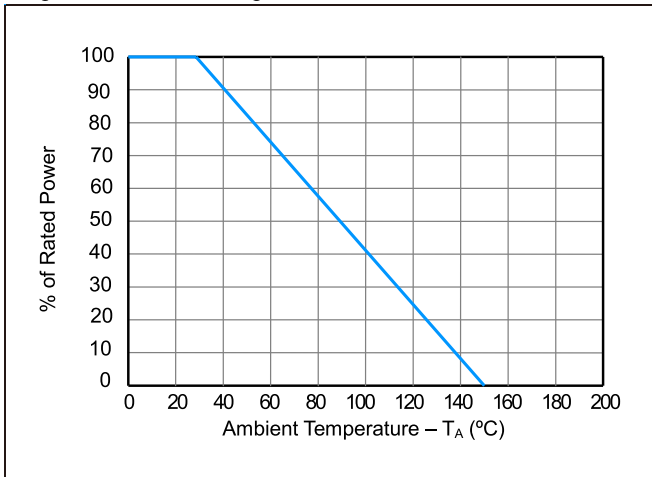
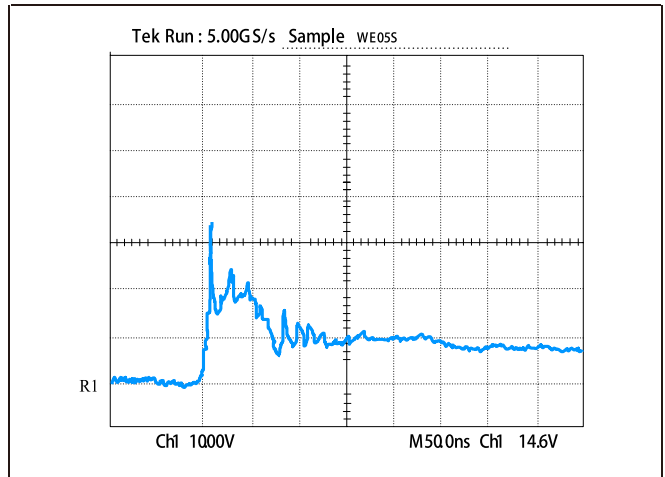
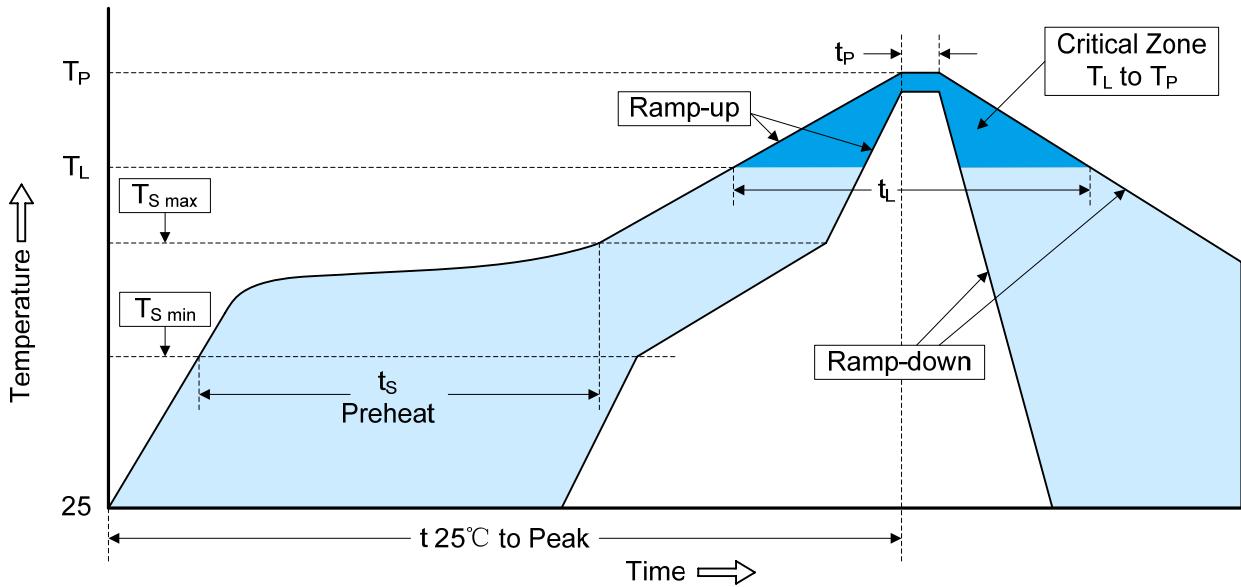


Figure 4: ESD Clamping (8kV Contact per IEC 61000-4-2)



## TVS/ESD Arrays - RLSD92A051LC Series

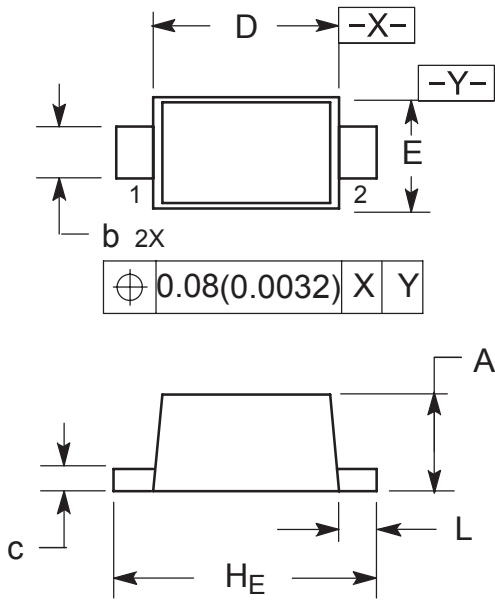
### Recommended Soldering Conditions



Profile Feature	Pb-Free Assembly
Average ramp-up rate (T <sub>L</sub> to T <sub>P</sub> )	3°C/second max.
Preheat	150°C
-Temperature Min (T <sub>S min</sub> )	200°C
-Temperature Max (T <sub>S max</sub> )	60-180 seconds
-Time (min to max) (t <sub>s</sub> )	
T <sub>S max</sub> to T <sub>L</sub>	3°C/second max.
-Ramp-up Rate	
Time maintained above:	217°C
-Temperature (T <sub>L</sub> )	60-150 seconds
-Time (t <sub>L</sub> )	
Peak Temperature (T <sub>P</sub> )	260°C
Time within 5°C of actual Peak Temperature (t <sub>p</sub> )	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

## TVS/ESD Arrays - RLSD92A051LC Series

### Package dimension SOD-923



DIM	Dimensions					
	Inches			Millimeters		
	Min	Nom	Max	Min	Nom	Max
A	0.014	0.016	0.017	0.36	0.40	0.43
b	0.006	0.008	0.010	0.15	0.20	0.25
C	0.003	0.005	0.007	0.07	0.12	0.17
D	0.030	0.031	0.038	0.75	0.80	0.85
E	0.022	0.024	0.026	0.55	0.60	0.65
H <sub>E</sub>	0.037	0.039	0.041	0.95	1.00	1.05
L	0.002	0.004	0.006	0.05	0.10	0.15

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