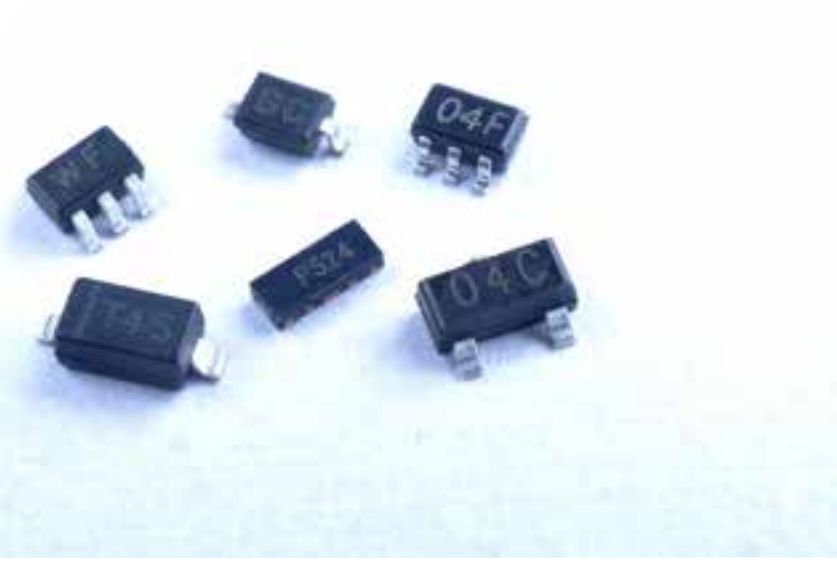
RUILON
瑞隆源电子



TVS/ESD Arrays

RLSD92Q031LC Series

361° Circuit Protection System

Revision:DEC-16

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

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ELECTRONICS

TVS/ESD Arrays - RLSD92Q031LC Series

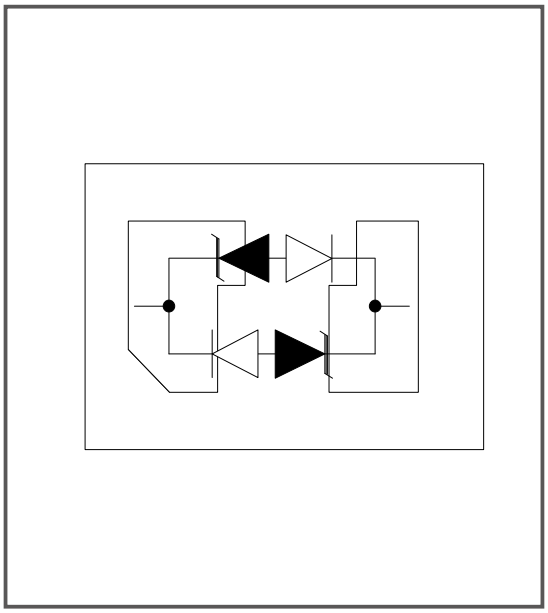
Features

- 90 Watts Peak Pulse Power per Line (tp = 8/20μs)
- Working voltages: 3.3V
- 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-882 package
- Molding compound flammability rating: UL 94V-0
- Quantity Per Reel :10,000pcs
- Reel Size : 7 inch
- Lead Finish : Lead Free

Pinout and Functional Block Diagram



Applications

- Video I/O ports protection
- Set Top Boxes
- Portable Instrumentation
- Notebooks, Desktops, and Servers
- Pagers Peripherals

Part Number Code

R	L	S	D	9	2	Q	0	3	1	L	C

- R L → LOGO
- S D 9 2 Q → Package: SOD-882
- 0 3 → V_{RWM}:3.3V
- 1 → Protects 1 Lines
- L → Low Capacitance
- C → V= Unidirectional; C= Bidirectional

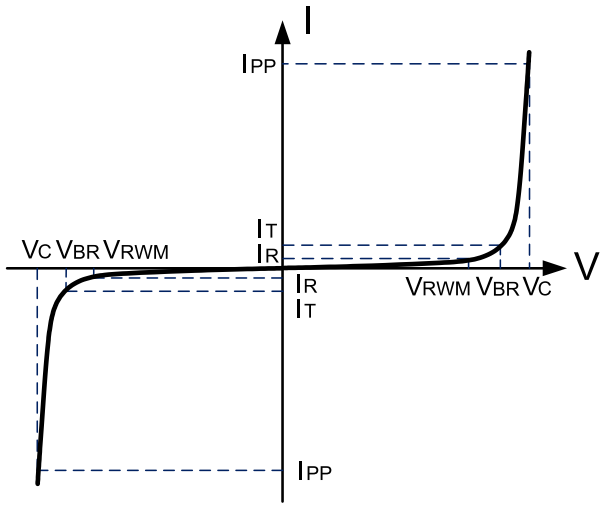
TVS/ESD Arrays - RLSD92Q031LC Series

Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power (tp =8/20μs)	P_{pk}	90	Watts
ESD Voltage (Contact)	V_{ESD}	±8	Kv
ESD Voltage (Air)	V_{ESD}	±15	Kv
Lead Soldering Temperature	T_L	260 (10 sec.)	°C
Operating Temperature	T_J	-55 to +125	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical Parameters (T=25°C)

Symbol	Parameter
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F



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_{RWM}	Typical Capacitance
	V_{RWM}	V_{BR}@1mA	V_C@1A	I_{PP}	I_R@V_{RWM}	DC=0V C_J@ 1 MHz
	V	V	V	A	μA	pF
RLSD92Q031LC	3.3	4.8	10	1	1	0.5

TVS/ESD Arrays - RLSD92Q031LC Series

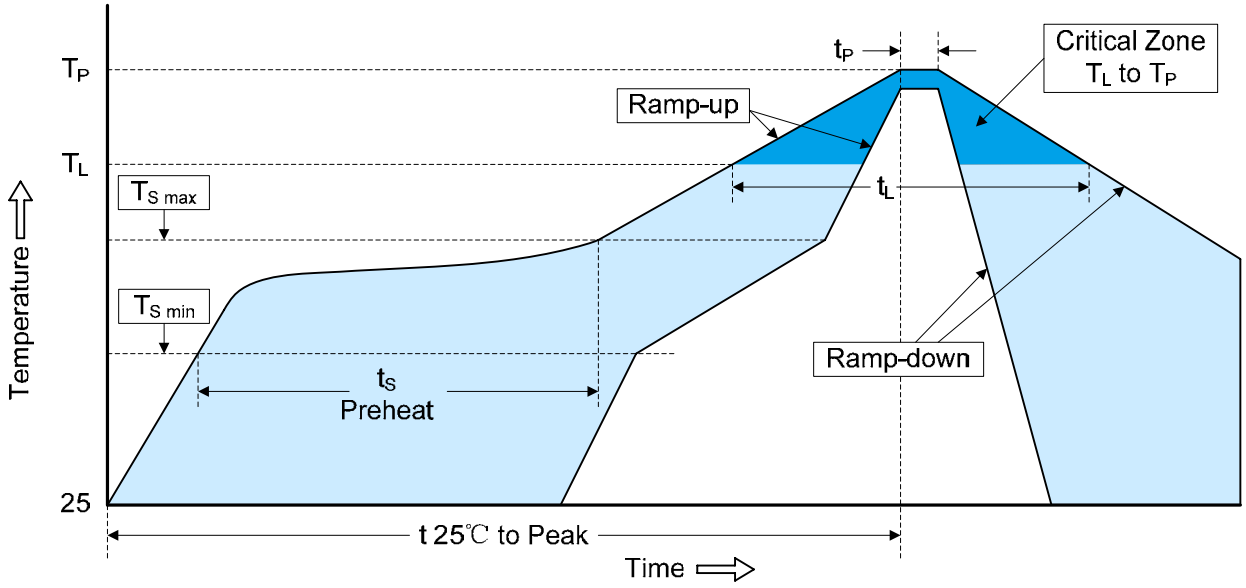
Typical Characteristics

Fig1. 8/20 s Pulse Waveform

Fig2. ESD Pulse Wavefo

TVS/ESD Arrays - RLSD92Q031LC Series

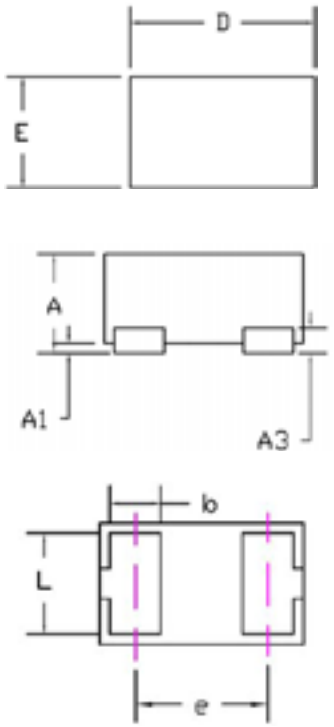
Recommended Soldering Conditions



Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (ts)	150°C 200°C 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	3°C/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	217°C 60-150 seconds
Peak Temperature (T_P)	260°C
Time within 5°C of actual Peak Temperature (t_P)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

TVS/ESD Arrays - RLSD92Q031LC Series

Package dimension SOD-882



Dimensions(Millimeters)			
Symbol	Min	Nom	Max
A	0.45	-	0.55
A1	0.01	-	0.05
A3		0.150Ref	
D	0.951	-	1.05
E	0.55	0.65	0.65
b	0.200	0.25	0.30
L	0.450	0.50	0.55
e		0.65 BSC	