

RUILON

瑞隆源电子



TVS/ESD Arrays

RLSO8A032LC Series

361° Circuit Protection
System

Revision:DEC-16

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

TVS/ESD Arrays - RLSO8A032LC Series

Features

- 1800 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)



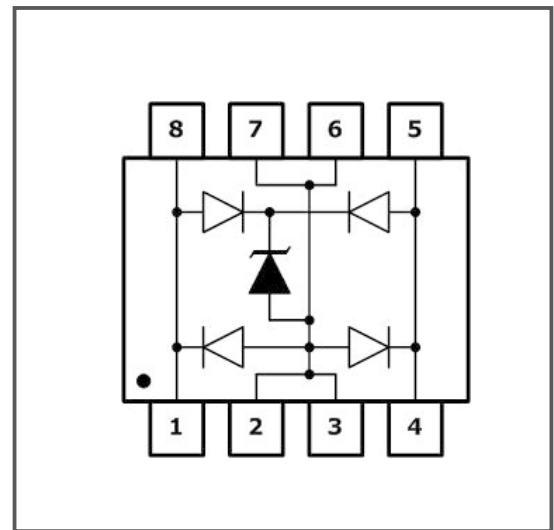
Mechanical Characteristics

- SOIC-08 package
- Molding compound flammability rating: UL 94V-0
- Quantity Per Reel : 500pcs
- Reel Size : 7 inch
- Lead Finish : Lead Free

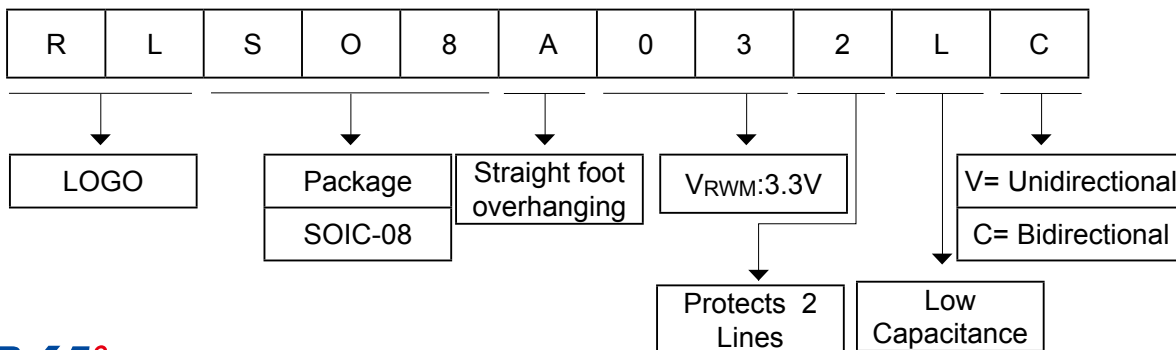
Applications

- Firewire & USB protection
- Set Top Box (STB) protection
- Video card (DVI) protection
- T1/E1 secondary IC side protection
- Conday IC side protection
- HDSL secondary IC side protection
- Microcontroller Input Protection

Pinout and Functional Block Diagram



Part Number Code



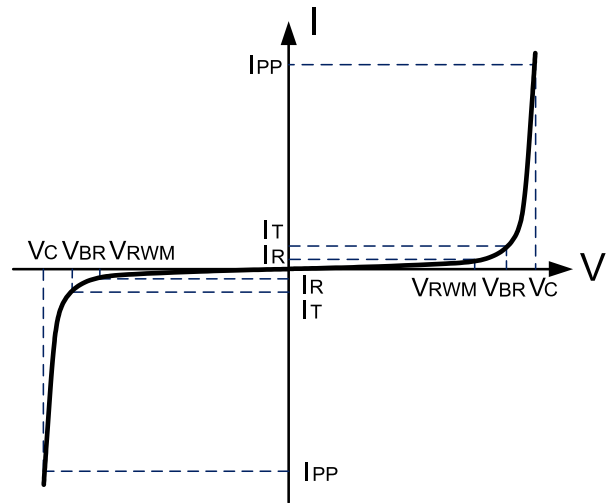
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Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power (tp =8/20μs)	PPK	1800	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 @VRWM	Typical Capacitance
	V _{RWM}	V _{BR} @1mA	V _C @1A	I _{PP}	I _R @VRWM	C _J @ 1 MHz
	V	V	V	A	μA	pF
RLSO8A032LC	3.3	4	7.5	100	0.5	5

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Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

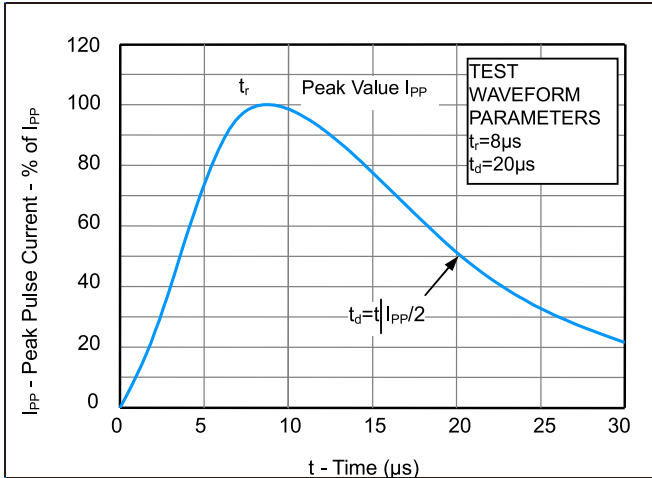


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

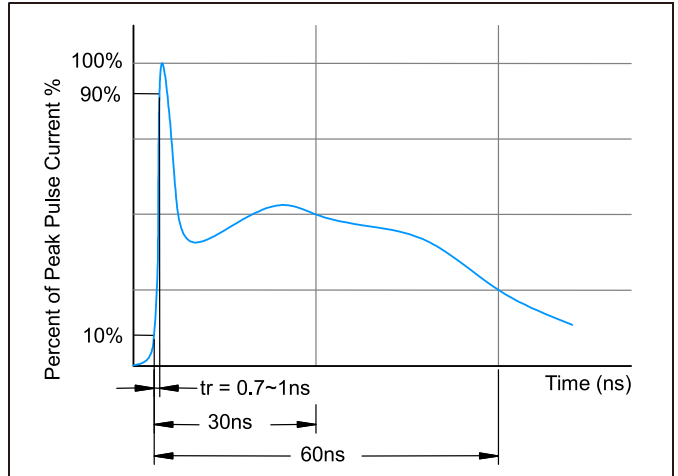


Fig3. Power Derating Curve

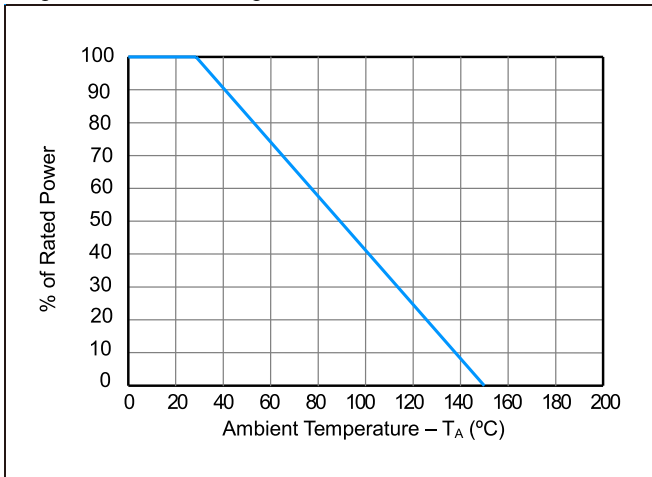
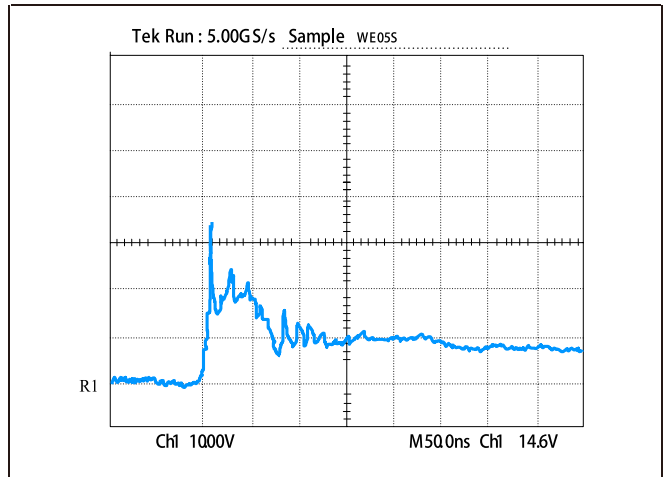
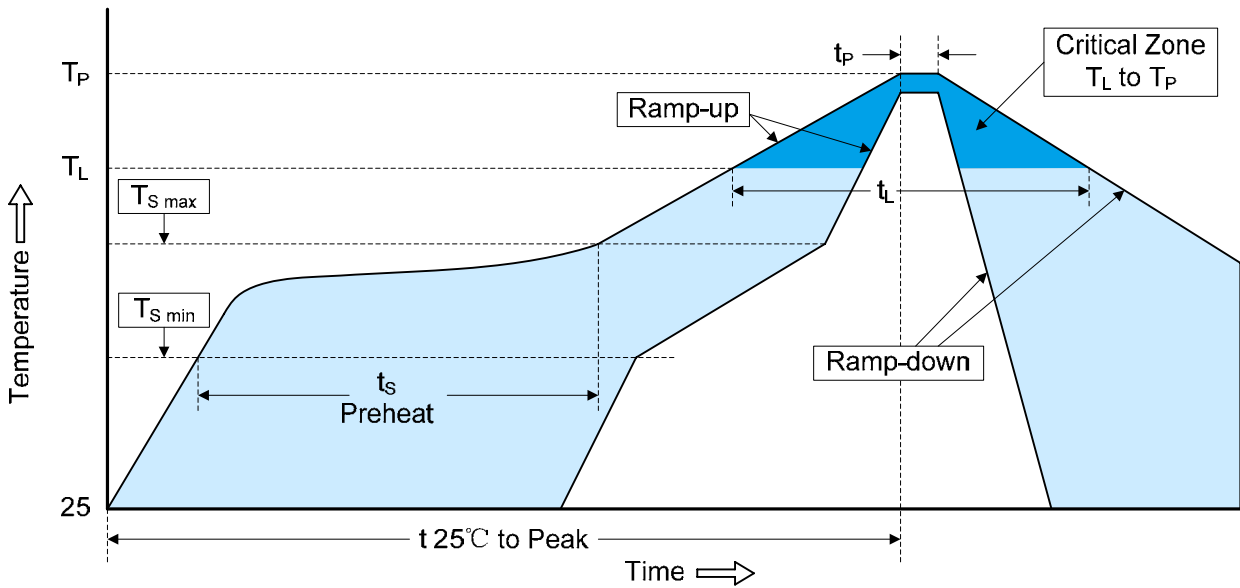


Figure 4: ESD Clamping (8kV Contact per IEC 61000-4-2)



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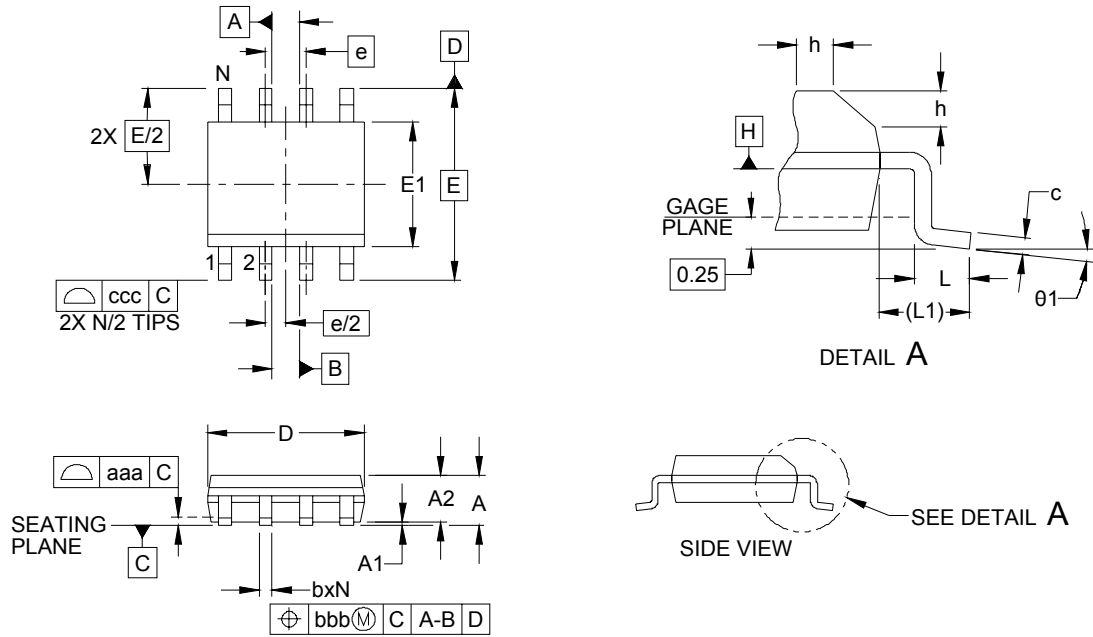
Recommended Soldering Conditions



Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat	
-Temperature Min ($T_{S\ min}$)	150°C
-Temperature Max ($T_{S\ max}$)	200°C
-Time (min to max) (t_s)	60-180 seconds
$T_{S\ max}$ to T_L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T_L)	217°C
-Time (t_L)	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.

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Package dimension SOIC-08



- NOTES:
1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
 2. DATUMS **-A-** AND **-B-** TO BE DETERMINED AT DATUM PLANE **-H-**
 3. DIMENSIONS "E1" AND "D" DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

DIM	Dimensions					
	Inches			Millimeters		
	Min	Nom	Max	Min	Nom	Max
A	0.053	-	0.069	1.35	-	1.75
A1	0.004	-	0.010	0.10	-	0.25
A2	0.049	-	0.065	1.25	-	1.65
b	0.012	-	0.020	0.31	-	0.51
c	0.007	-	0.010	0.17	-	0.25
D	0.189	0.193	0.197	4.80	4.90	5.00
E1	0.150	0.154	0.157	3.80	3.90	4.00
E		0.236 BSC			6.00 BSC	
e		0.050 BSC			1.27BSC	
h	0.010	-	0.20	0.25	-	0.50
L	0.016	0.028	0.40	0.40	0.72	1.04
L1		(0.041)			(1.04)	
N		8			8	
$\theta 1$	0°	-	8°	0°	-	8°
aaa		0.004			0.10	
bbb		0.010			0.25	
ccc		0.008			0.20	