

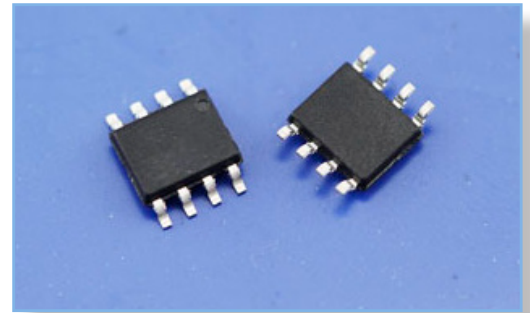
# TVS/ESD Arrays

RLSO8A2.84LV Series

## TVS/ESD Arrays - RLSO8A2.84LV Series

### Features

- 400 Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Transient protection for high speed 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 $\mu s$ )
- Protects two line pairs (four lines)
- Comprehensive pin out for easy board layout
- Low capacitance
- Low leakage current
- Low operating and clamping voltages
- Solid-state EPD TVS process technology



### Mechanical Characteristics

- JEDEC SOIC-8 package
- Molding compound flammability rating: UL 94V-0
- Marking : Part number, date code, logo
- Packaging : Tape and Reel

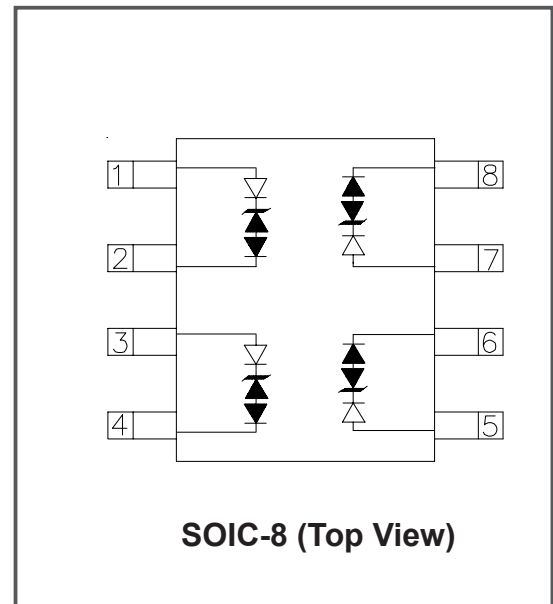
### Applications

- 10/100 Ethernet
- WAN/LAN Equipment
- Switching Systems
- Desktops, Servers, and Notebooks
- Instrumentation
- Base Stations
- Analog Inputs

### 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 - RLSO8A2.84LV Series

### Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{pk}$	400	Watts
Peak Pulse Current ( $t_p = 8/20\mu s$ )	$I_{pp}$	24	A
ESD per IEC 61000-4-2 (Air)	$V_{ESD}$	25	Kv
ESD per IEC 61000-4-2 (Contact)	$V_{ESD}$	15	Kv
Lead Soldering Temperature	$T_k$	260 (10 sec.)	$^{\circ}C$
Operating Temperature	$T_j$	-55 to +125	$^{\circ}C$
Storage Temperature	$T_{STG}$	-55 to +150	$^{\circ}C$

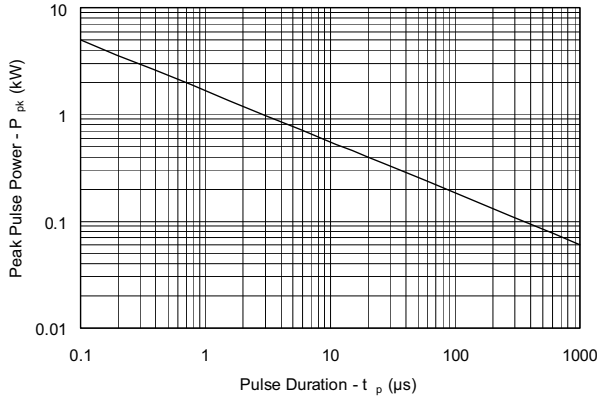
### Electrical Characteristics Per Lin (@ 25 $^{\circ}C$ Unless Otherwise Specified)

Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	$V_{RWM}$	-	-	-	2.8	V
Punch-Through Voltage	$V_{PT}$	$I_{pT} = 2\mu A$	3.0	-	-	V
Snap-Back Voltage	$V_{SB}$	$I_{SB} = 50mA$	2.8	-	-	V
Reverse Leakage Current	$I_R$	$V_{RWM} = 2.8V, T = 25^{\circ}C$ (Each Line)	-	-	1	$\mu A$
Clamping Voltage	$V_C$	$I_{pp} = 1A, t_p = 8/20\mu s$ (Each Line)	-	-	5.5	V
Clamping Voltage	$V_C$	$I_{pp} = 5A, t_p = 8/20\mu s$ (Each Line)	-	-	8.5	V
Clamping Voltage	$V_C$	$I_{pp} = 24A, t_p = 8/20\mu s$ (Each Line)	-	-	15	V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$ (Each Line)	-	5	-	pF

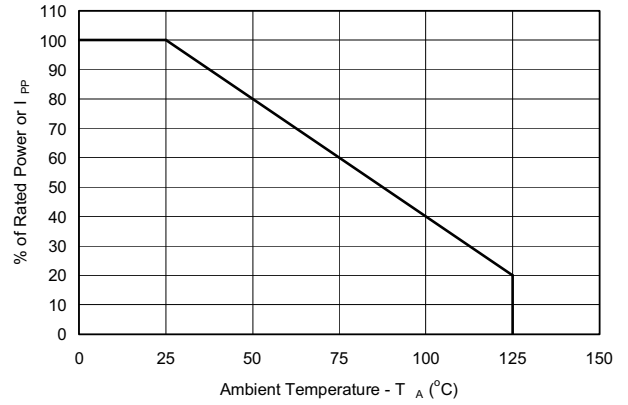
## TVS/ESD Arrays - RLSO8A2.84LV Series

### Typical Characteristics

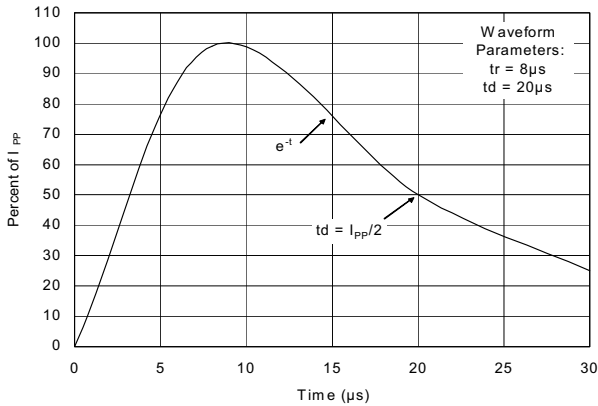
Non-Repetitive Peak Pulse Power vs. Pulse Time



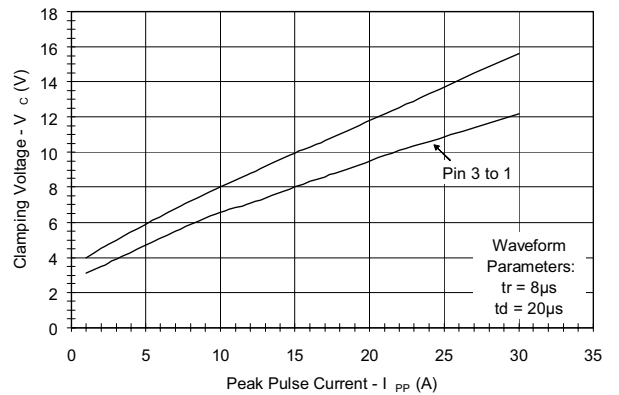
Power Derating Curve



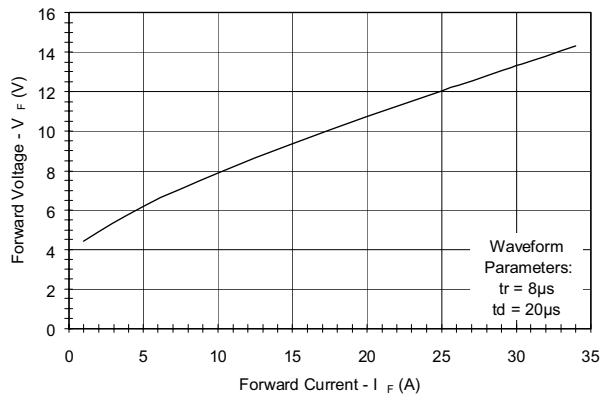
Pulse Waveform



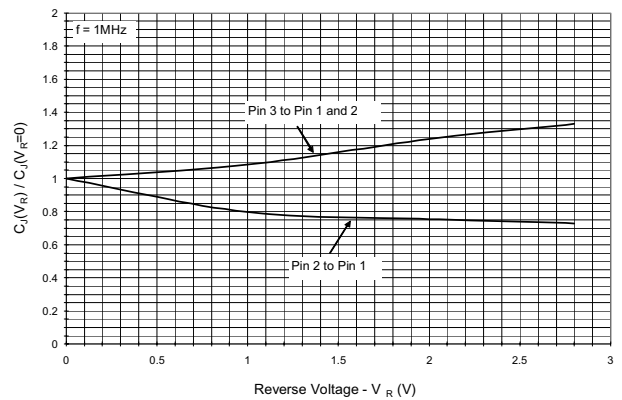
Clamping Voltage vs. Peak Pulse Current



Forward Voltage vs. Forward Current

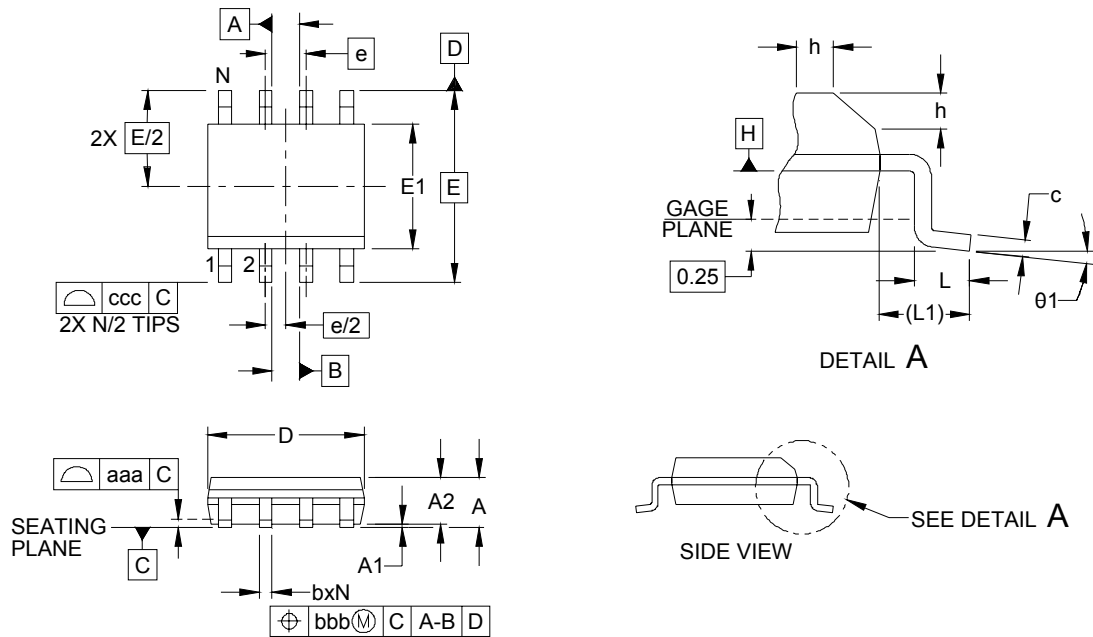


Normalized Capacitance vs. Reverse Voltage



## TVS/ESD Arrays - RLSO8A2.84LV Series

### Package dimension SOIC-08



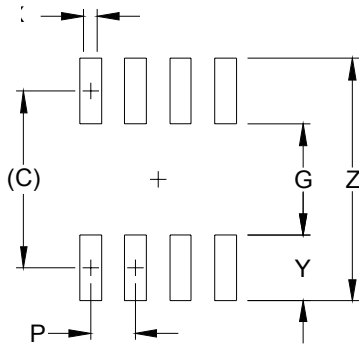
**NOTES:**

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 BSCBSC		
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		

## TVS/ESD Arrays - RLSO8A2.84LV Series

### Land Pattern SOIC-08

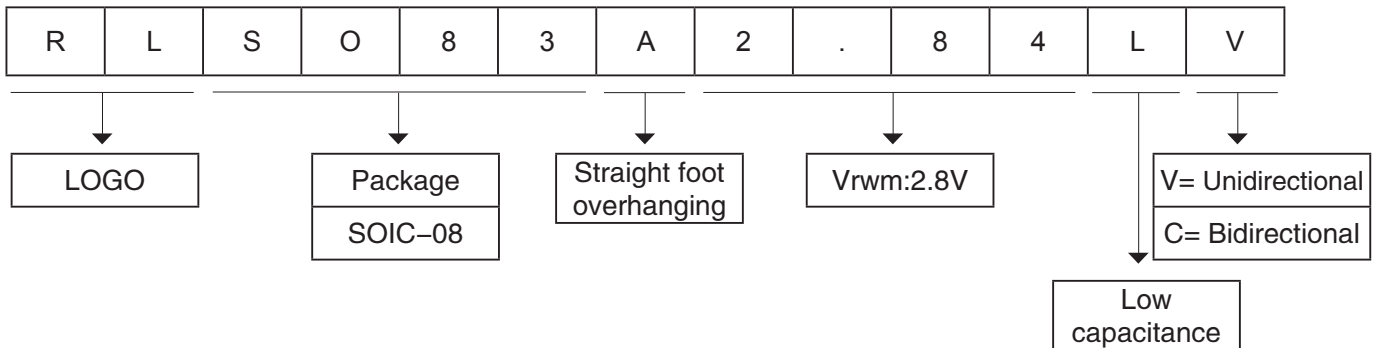


Dimensions		
DIM	Inches	Millimeters
C	(0.205)	(5.20)
G	0.118	3.00
P	0.050	1.27
X	0.04	0.60
Y	0.087	2.20
Z	0.291	7.40

**NOTES:**

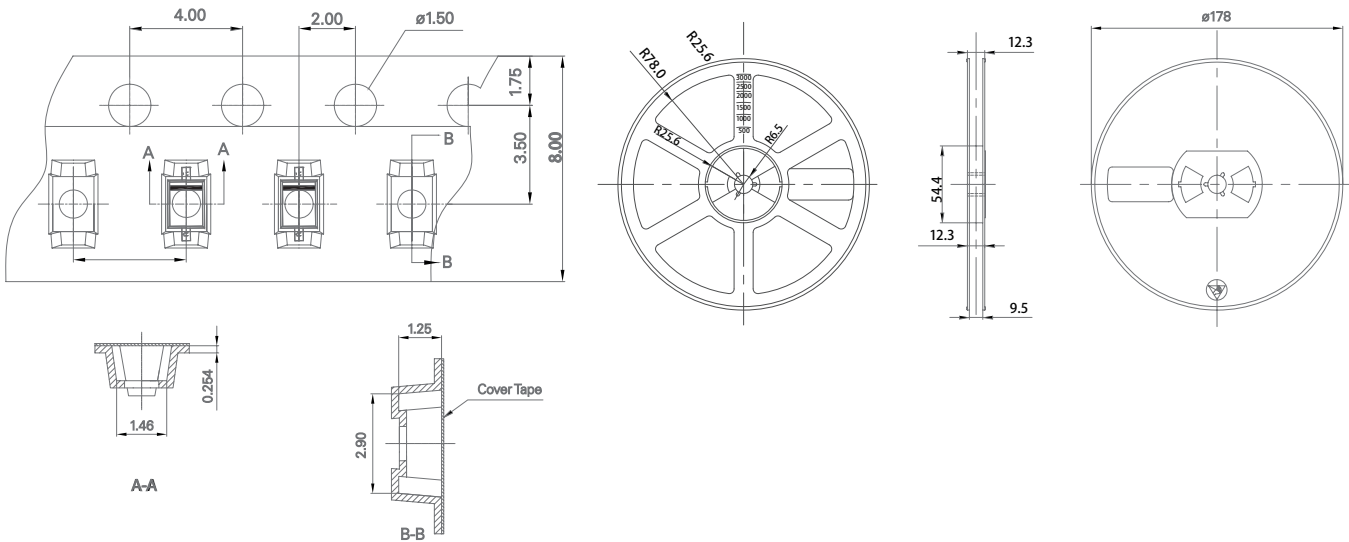
1. THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY. CONSULT YOUR MANUFACTURING GROUP TO ENSURE YOUR COMPANY'S MANUFACTURING GUIDELINES ARE MET.
2. REFERENCE IPC-SM-782A, RLP NO. 300A.

### Part Number Code



## TVS/ESD Arrays - RLSO8A2.84LV Series

### Ordering Information



### Ordering Information

Part Number	Package	Min. Order Qty.
RLSO8A2.84LV	SOIC-08	3000pcs

### Warehouse Storage Conditions of Products

- Storage Conditions:
  - Storage Temperature:  $-10^{\circ}\text{C}\sim+40^{\circ}\text{C}$
  - Relative Humidity:  $\leq 75\% \text{RH}$
  - Keep away from corrosive atmosphere and sunlight.
- Period of Storage: 1 year

## RuiLongYuan Electronics Co., Ltd.

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