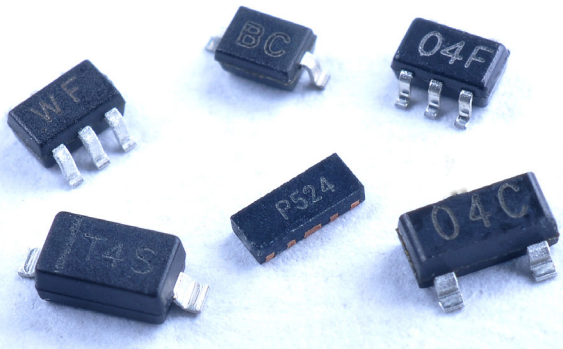
RUILON
ELECTRONICS



TVS/ESD Arrays

RLSO8A054LV Series

361° Circuit Protection System

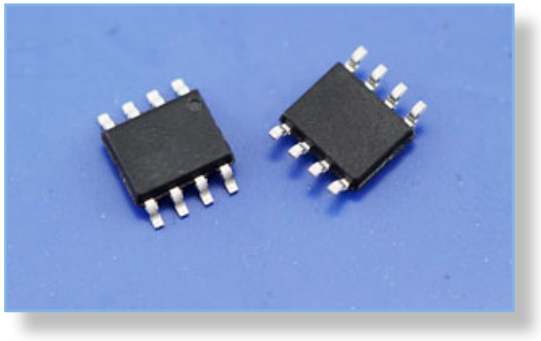
Specifications are subject to change without notice.

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

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TVS/ESD Arrays - RLSO8A054LV Series

Features



- IEC61000-4-2 ESD 15KV Air,8KV contact compliance
- SOIC-08 surface mount package
- Protects seven I/O lines and two power lines
- Peak power dissipation of 500W under 8/20us waveform
- Working voltage : 5V
- Low leakage current
- Low capacitance and clamping voltages
- Solid-state silicon avalanche technology
- Lead Free/RoHS compliant
- Solder reflow temperature:Pure Tin-Sn,260-270
- Flammability rating UL 94V-0

Mechanical Characteristics

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

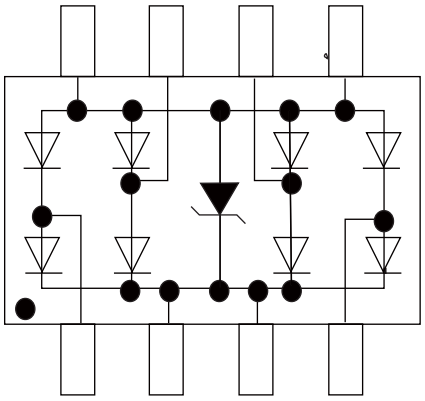
Applications

- Ethernet-10/100 base T
- Firewire & USB protection
- Set Top Box (STB) protection
- Video card (DVI) protection
- T1/E1 secondary IC side protection
- T3/E3 se• condary IC side protection
- HDSL secondary IC side protection
- SPECIFICATION FEATURES
- IC bus protection
- Micro-controller line protection

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



SOIC-8 (Top View)

TVS/ESD Arrays - RLSO8A054LV Series

Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak pulse power (tp=8/20 s waveform)	P_{pp}	500	Watts
ESD voltage (HBM contact)	VESD	±8	A
ESD voltage (AIR contact)	V_{ESD}	±15	Kv
Storage & operating temperature range	TSTG ,TJ	-55~+150	°C

Electrlcal Characterlstlcs Per Lin (@ 25°C Unless Otherwise Specified)

Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voitage	V_{RWM}	-	-	-	5	V
Reverse breakdown voltage	VBR	IBR=1mA	6.0	-	-	V
Reverse leakage current	I_R	VR =5V each I/O pin	-	-	10	μA
Clamping voltage (tp=8/20s)	V_C	IPP=1A	-	-	9.8	V
Clamping voltage (tp=8/20s)	V_C	I_{IPP} =10A	-	-	13.5	V
Off state junction capacitance	V_C	0Vdc,f=1MHZ between I/O pins and GND	-	-	15	pF

TVS/ESD Arrays - RLSO8A054LV Series

Typical Characteristics

Figure 1. Power Derating Curve

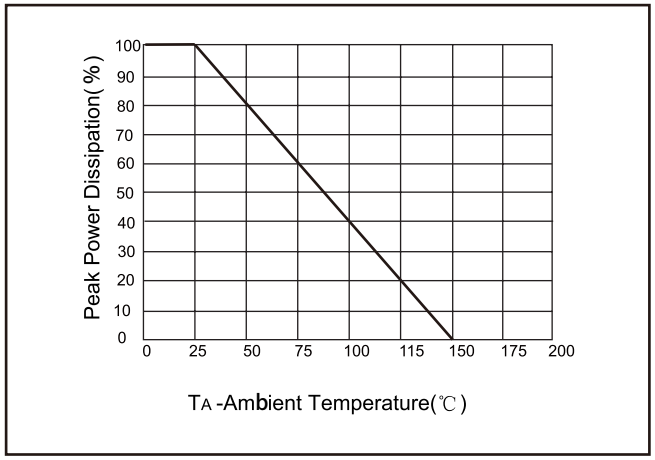


Figure 2. Pulse Waveforms

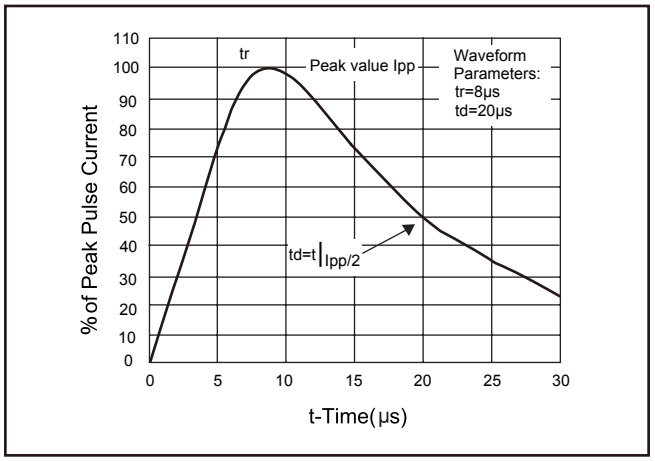


Figure 3. Non-Repetitive Peak Pulse vs Pulse Time

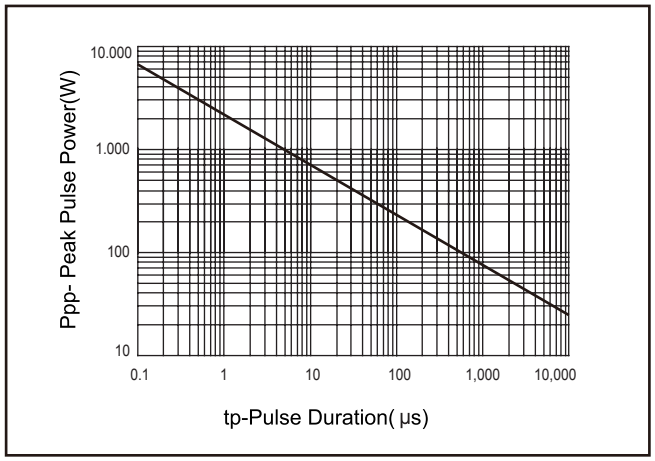
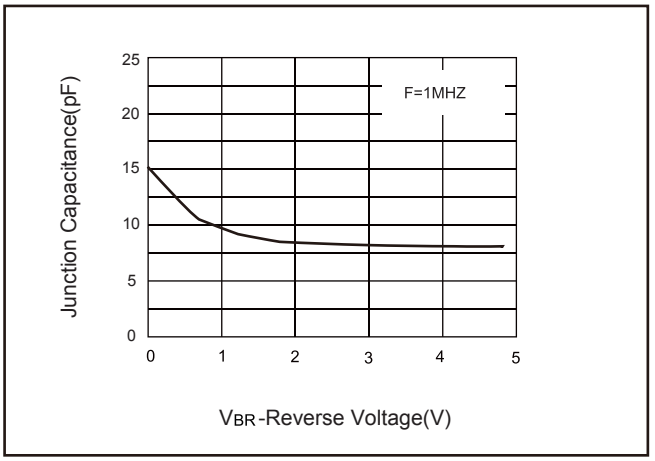
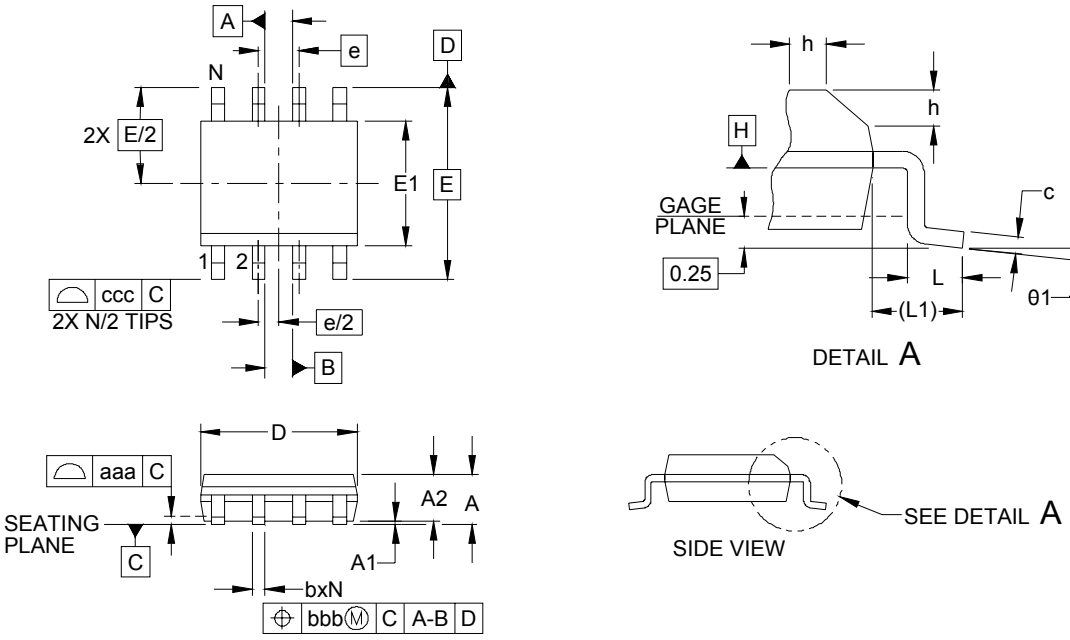


Figure 4. Capacitance vs. Reverse Voltage



TVS/ESD Arrays - RLSO8A054LV Series

Package dimension SOIC-08



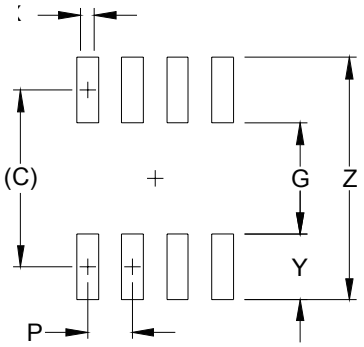
NOTES:

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.

Dimensions						
DIM	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	
θ1	0°	-	8°	0°	-	8°
aaa		0.004			0.10	
bbb		0.010			0.25	
ccc		0.008			0.20	

TVS/ESD Arrays - RLSO8A054LV Series

Soldering footprint

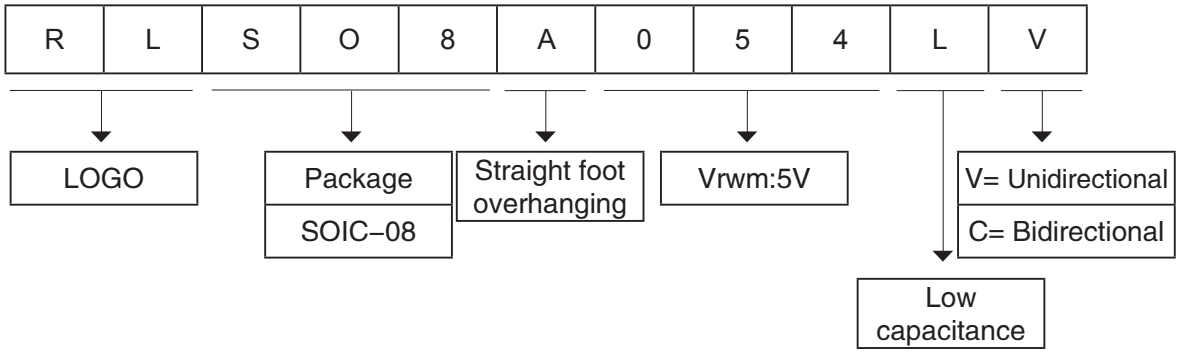


Dimensions		
DIM	Inches	Millimeters
C	(0.205)	(5.20)
G	0.118	3.00
P	0.050	1.27
X	0.04	0.60
Y	0.087	2.20
Z	0.291	7.40

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



Ordering Information

Part Number	Package	Min. Order Qty.
RLSO8A054LV	SOIC-08	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.

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