

TVS/ESD Arrays

RLSD52A Series

TVS/ESD Arrays - RLSD52A Series

Features

- Transient protection for data lines to IEC 61000-4-2 (ESD) $\pm 30\text{kV}$ (air), $\pm 15\text{kV}$ (contact)
IEC 61000-4-4 (EFT) 40A (tp = 5/50ns)
Cable Discharge Event (CDE)
- Ultra-small SOD-523 package (1.7 x 0.9 x 0.7mm)
- Protects one I/O or power line
- Low clamping voltage
- Working voltage
- Low leakage current
- Solid-state silicon-avalanche technology



Mechanical Characteristics

- SOD-523 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel per EIA 481
- Lead Finish: Matte tin
- RoHS Compliant

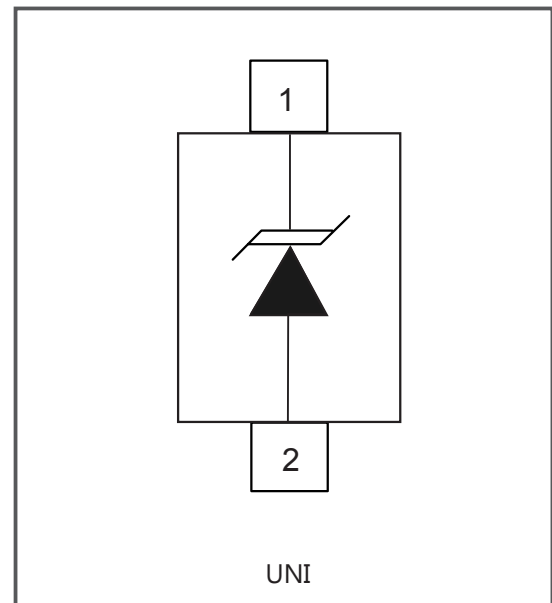
Applications

- Switches / Buttons
- Test Equipment /Instrumentation
- Point-of-Sale Terminals
- Medical Equipment
- Notebooks / Desktops /Servers
- Computer Peripherals

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



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Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power (tp = 8/20μs)	P _{pk}	200	Watts
Maximum Peak Pulse Current (tp = 8/20μs)	I _{pp}	8	Amps
ESD per IEC 61000-4-2 (Air)	V _{pp}	+/-30	Kv
ESD per IEC 61000-4-2 (Contact)	V _{pp}	+/-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

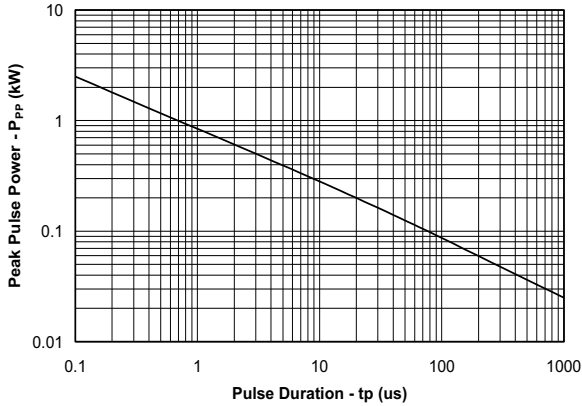
Electrical Characteristics Per Lin (@ 25°C Unless Otherwise Specified)

Type Number	Peak Power Dissipation @8/20μS Pppm	Reverse Stand-Off Voltage	Peak Pulse Voltage @8/20μS Pppm	Peak Pulse Current @8/20μS Pppm	Reverse Leakage @V _{rw}	Maximum Capacitance @1MHZ
		V _{rw}	V _{c@IPP}	IPP	IR@V _{rw}	Co
		Max			Max	Max
UNI	W	V	V	A	μA	UNI(pF)
RLSD52A031V	200	3.3	6.5	5	1	200
RLSD52A051V	200	5	9	5	1	110
RLSD52A081V	200	8	15	5	1	70
RLSD52A121V	200	12	17	5	1	60
RLSD52A151V	200	15	22	5	1	50
RLSD52A181V	200	18	28	5	1	40
RLSD52A241V	200	24	32	3	1	25
RLSD52A361V	200	36	55	1	1	20

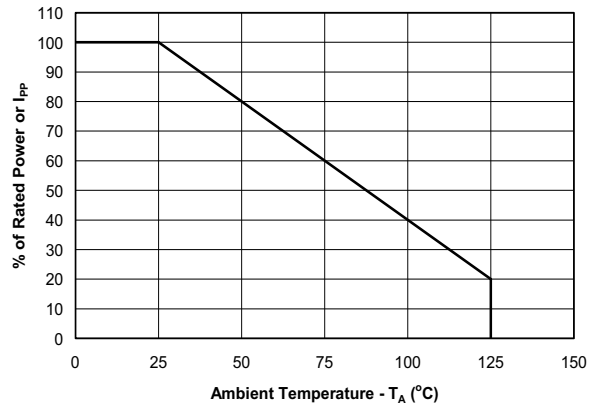
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Typical Characteristics

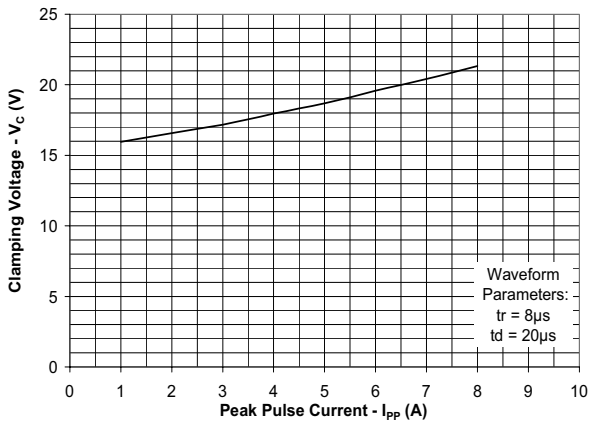
Non-Repetitive Peak Pulse Power vs. Pulse Time



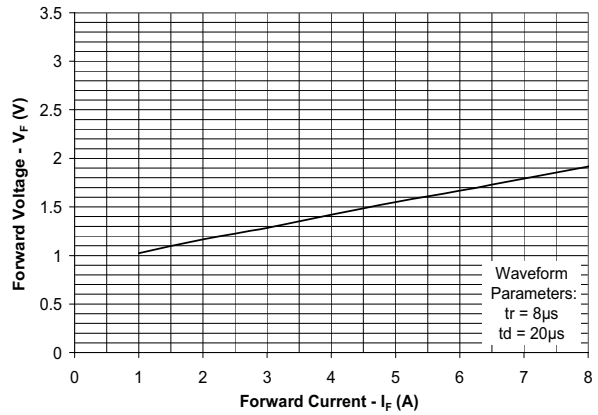
Power Derating Curve



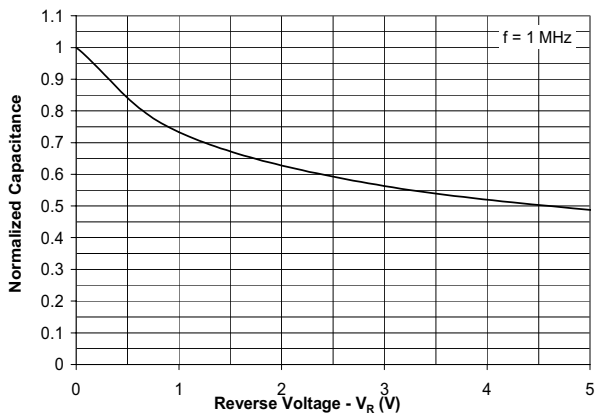
Clamping Voltage vs. Peak Pulse Current



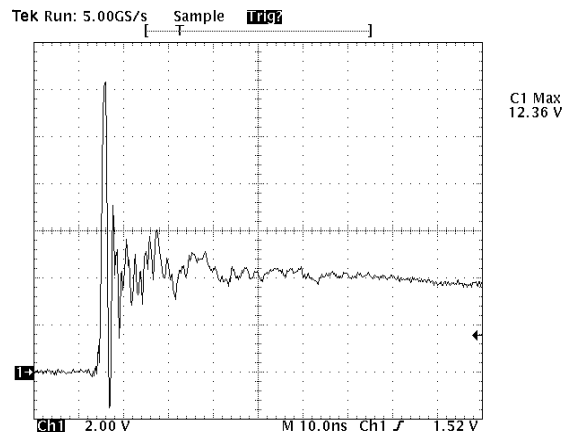
Forward Voltage vs. Forward Current



Junction Capacitance vs. Reverse Voltage

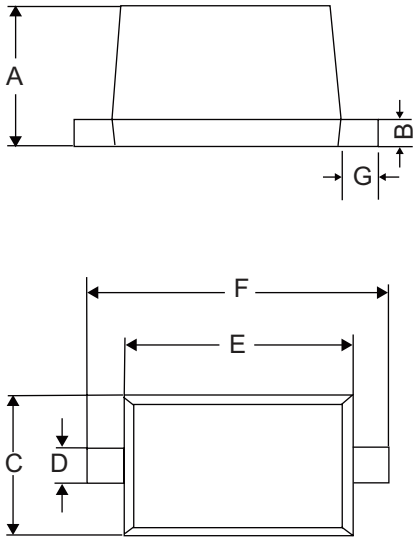


ESD Clamping
(8kV Contact per IEC 61000-4-2)



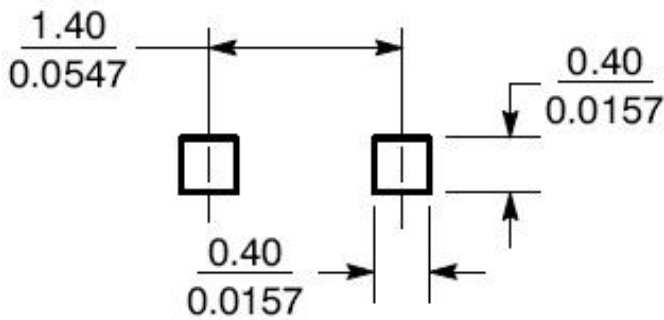
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Package dimension SOD-523



Symbol	Dimensions					
	Inches			Millimeters		
	Min	Nom	Max	Min	Nom	Max
A	0.020	0.024	0.028	0.50	0.60	0.70
B	0.003	0.006	0.008	0.07	0.14	0.20
C	0.028	0.031	0.035	0.70	0.80	0.90
D	0.010	0.012	0.014	0.25	0.30	0.35
E	0.043	0.047	0.051	1.10	1.20	1.30
F	0.059	0.063	0.067	1.50	1.60	1.70
G	0.006	0.008	0.010	0.15	0.20	0.25

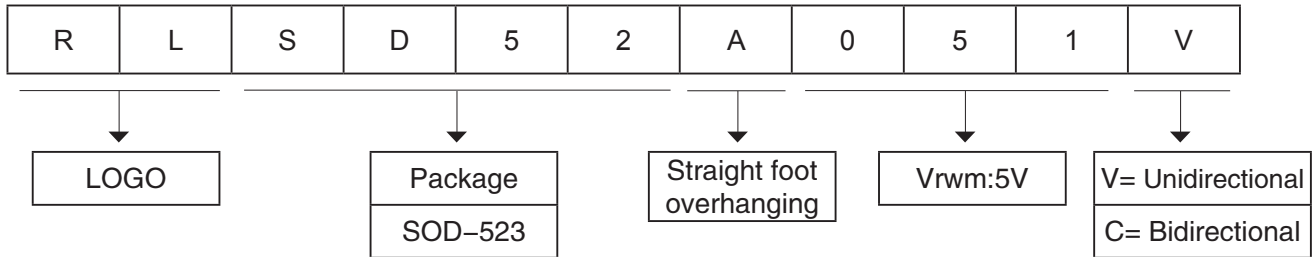
Soldering footprint



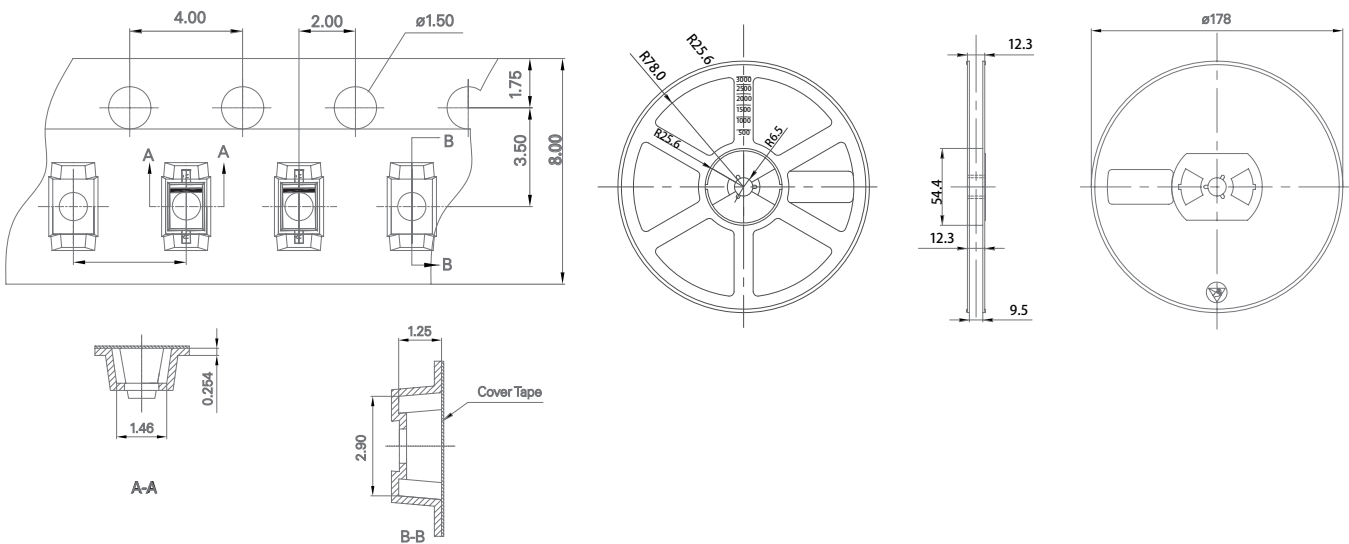
SCALE 10:1 $\left(\frac{\text{mm}}{\text{inches}}\right)$

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Part Number Code



Tape and reel



Ordering Information

Part Number	Package	Min. Order Qty.
RLSD52AxxxV	SOD-523	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.
4. Period of Storage: 1 year

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