Description

Designed to protect voltage sensitive electronic components from ESD and other transients. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to ESD.
The combination of small size, high level of ESD protection makes them a flexible solution for applications such as Digital cameras,cellular phones, and MP3 Players. It is designed to replace multiplayer varistors (MLV) in consumer equipments applications such as mobile phone, notebook, PAD, STB, LCD TV etc.

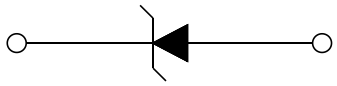
Features

- Uni-directional ESD protection of one line
- Reverse stand−off voltage: 12V
- Low reverse clamping voltage
- Low leakage current
- Excellent package:1.70mm×1.30mm×1.00mm
- Fast response time
- JESD22-A114-B ESD Rating of class 3B per human body model
- IEC 61000-4-2 Level 4 ESD protection

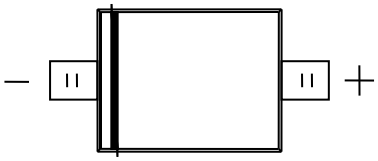
Applications

- Computers and peripherals
- Digital Cameras
- Audio and video equipment
- Cellular handsets and accessories
- Portable electronics
- Mp3 Players
- Other electronics equipments communication systems
- Smart Phones
- Laptop Computers
- Portable Electronics

Circuit Diagram

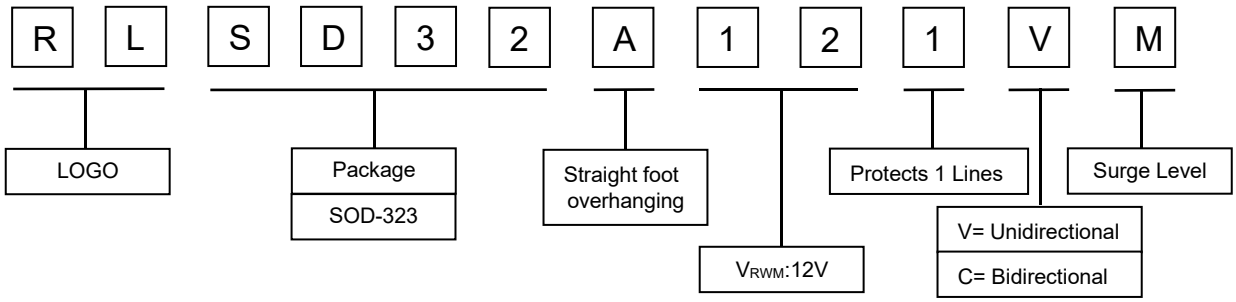


Pin Configuration



Front side

Part Number Code



Absolute Maximum Rating

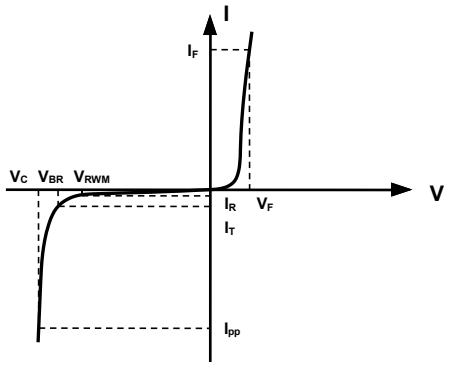
Rating	Symbol	Value	Units
Peak Pulse Power (tp =8/20μs)	P_{PP}	800	W
ESD Voltage (Contact)	V_{ESD}	±30	kV
ESD Voltage (Air)	V_{ESD}	±30	kV
Lead Soldering Temperature	T_L	260 (10 s)	°C
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{STG}	-55 to 150	°C

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}	Max 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
RLSD32A121VM	12	13.3	15	40	1.0	150

Electrical Parameters (T=25°C)

Symbol	Parameter
I_{pp}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{pp}
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



Characteristic Curves

Fig 1. 8/20μs Pulse Waveform

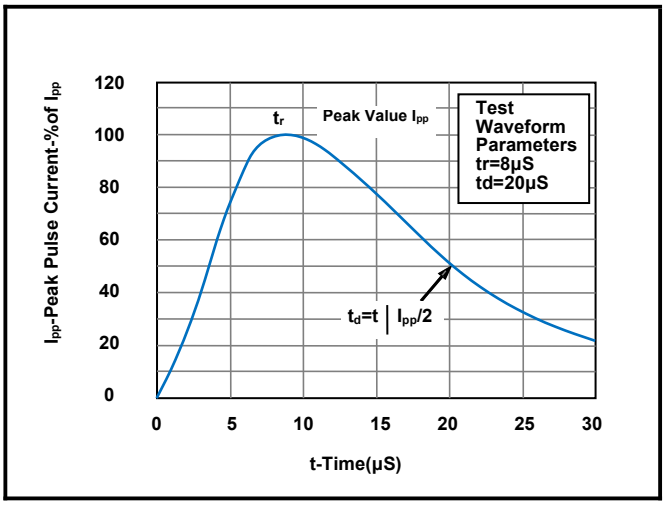
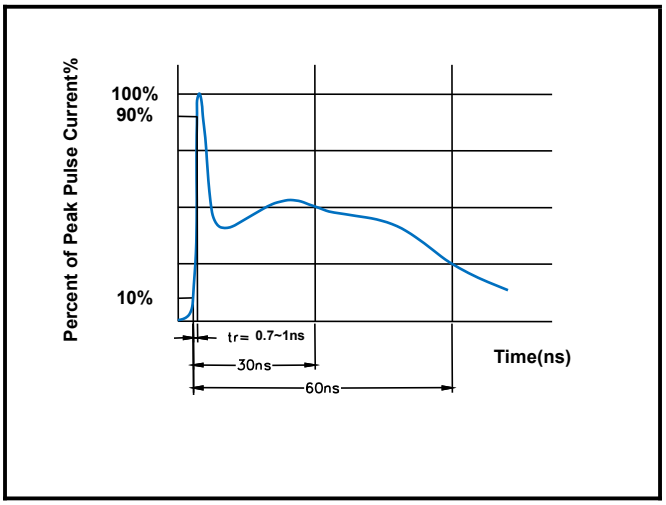
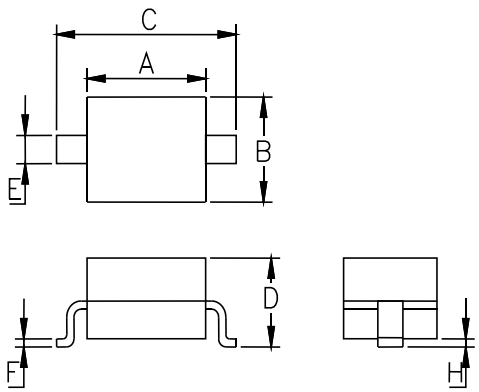


Fig2.ESD Pulse Waveform (according to IEC61000-4-2)



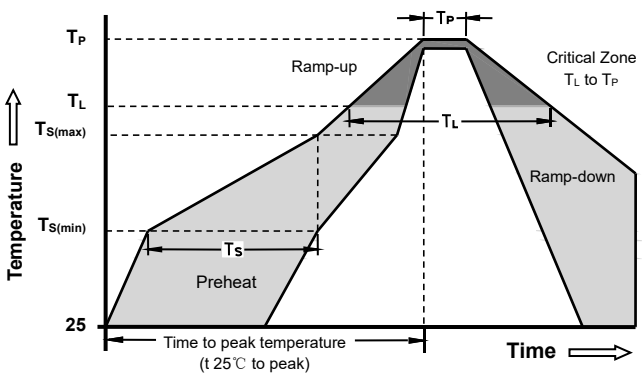
Dimensions & Recommended soldering footprint(mm)



DIM	Millimeters		Inches	
	Min	Max	Min	Max
A	1.5	1.8	0.059	0.071
B	1.2	1.4	0.047	0.055
C	2.3	2.7	0.091	0.106
D	-	1.1	-	0.043
E	0.3	0.4	0.012	0.016
F	0.10	0.25	0.004	0.010
H	-	0.1	-	0.010

Part Number	Component package	Quantity	Reel Size
RLSD32A121VM	SOD-323	3000	7 inch

Soldering Parameters - Reflow Soldering (Surface Mount Devices)



Reflow Condition		Pb - Free assembly
Pre Heat	-Temperature Min ($T_{s(min)}$)	150°C
	-Temperature Max ($T_{s(max)}$)	200°C
	- Time (min to max) (t_s)	60 -180 Seconds
Average ramp up rate (Liquids Temp T_L) to peak		3°C/second max
$T_{S(max)}$ to TL - Ramp-up Rate		3°C/second max
Reflow	- Temperature (T_L) (Liquids)	217°C
	- Time (min to max) (t_s)	60 -150 Seconds
Peak Temperature (T_P)		260 +0/-5°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 (T_P)		8 minutes Max
Do not exceed		280°C