

TVS/ESD Arrays

RLSD32AxxxC Series

TVS/ESD Arrays - RLSD32AxxxC Series

Features

- 100 Watts Peak Pulse Power per Line ($t_p = 8/20\mu s$)
- Replacement for MLV (0805)
- Unidirectional & Bidirectional Configurations
- Protects one I/O or power line
- Low Clamping Voltage
- Low Leakage Current
- Response Time is Typically $< 1ns$



Mechanical Characteristics

- SOD-323 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel per EIA 481
- Lead Finish: Matte tin
- RoHS Compliant

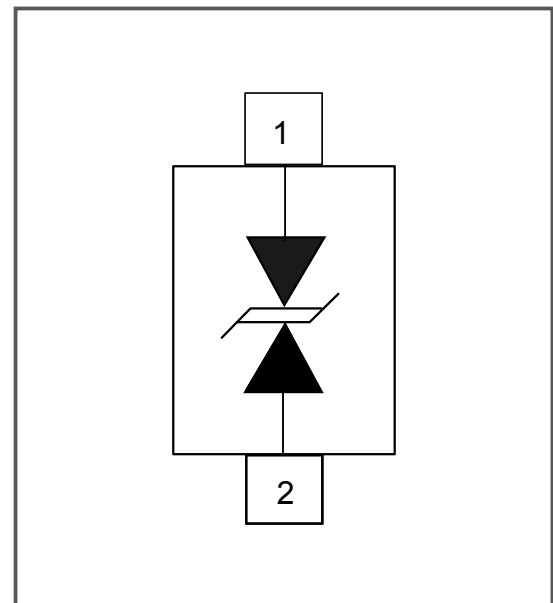
IEC COMPATIBILITY (EN61000-4)

- 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 μs)

Applications

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Pagers Peripherals

Pinout and Functional Block Diagram



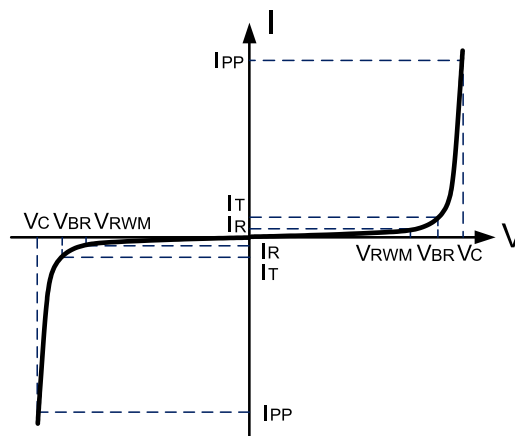
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Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{pk}	100	Watts
Maximum Peak Pulse Current ($t_p = 8/20\mu s$)	I_{PP}	24	Amps
ESD voltage (HBM contact)	V_{ESD}	± 8	Kv
ESD voltage (AIR contact)	V_{ESD}	± 15	Kv
Lead Soldering Temperature	T_L	260 (10 sec.)	$^{\circ}C$
Operating Temperature	T_J	-55 to +125	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to +150	$^{\circ}C$

Electrical Parameters ($T=25^{\circ}C$)

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

Type Number	Peak Power Dissipation @ $8/20\mu s$ Pppm	Reverse Stand-Off Voltage	Minimum Breakdown Voltage	Peak Pulse Voltage @ $8/20\mu s$	Peak Pulse Current @ $8/20\mu s$	Reverse Leakage @ V_{RWM}	Typical Capacitance
		V_{RWM}	$V_{BR}@1mA$	$V_C@I_{PP}$	I_{PP}	$I_R@V_{RWM}$	DC=0V
		Max				Max	$C_J@1MHz$
	W	V	V	V	A	μA	pF
RLSD32A031C	100	3.3	4.0	7.5	5	200	350
RLSD32A051C	100	5	6.0	9.8	5	10	200
RLSD32A081C	100	8	8.5	13.4	5	5	125
RLSD32A121C	100	12	13.3	19	5	1	110
RLSD32A151C	100	15	16.7	24	5	1	90
RLSD32A181C	100	18	19.0	29	5	1	75
RLSD32A241C	100	24	26.7	36	1	1	35
RLSD32A361C	100	36	40	58	1	1	25

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Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

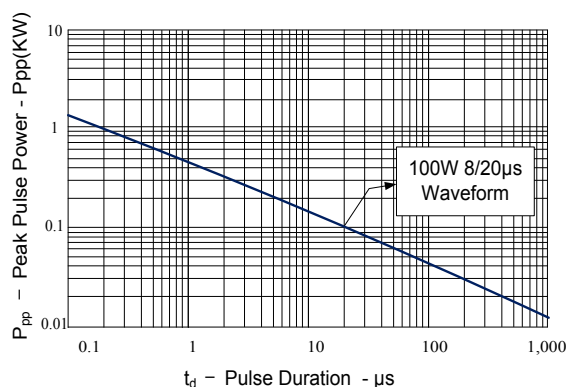


Figure 2: Power Derating Curve

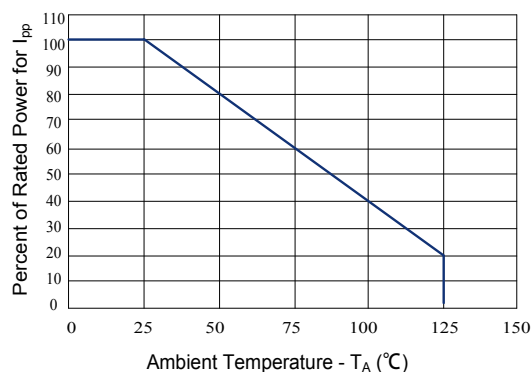


Figure 3: Clamping Voltage vs. Peak Pulse Current

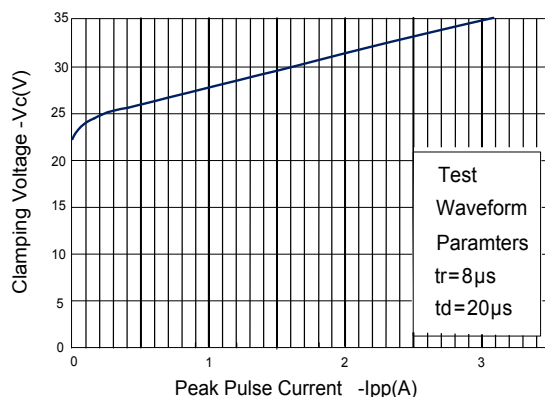


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

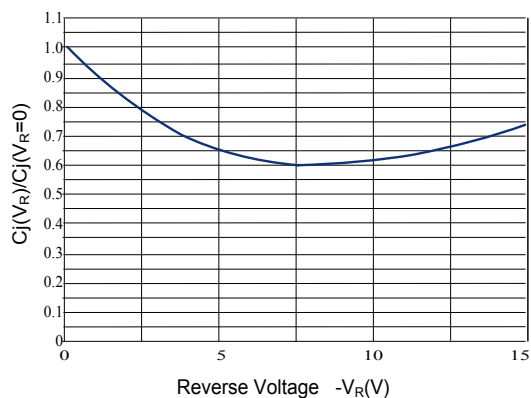


Figure 5: Pulse Waveform

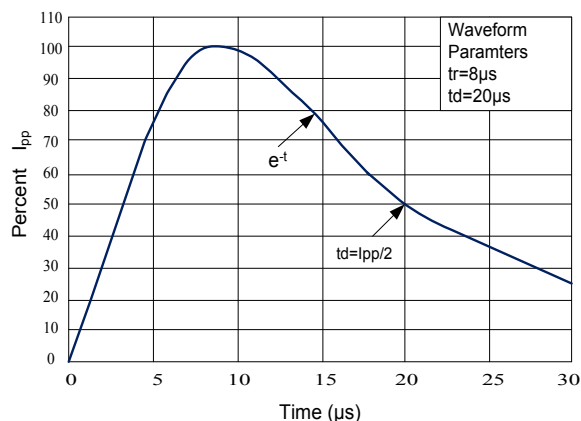
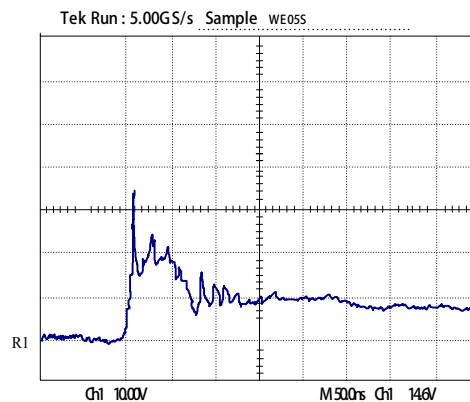
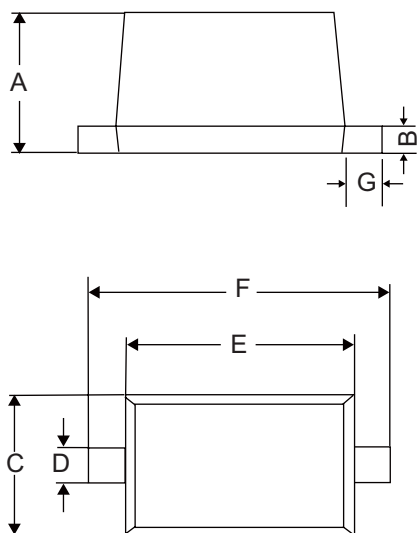


Figure 6: ESD Clamping (8kV Contact per IEC 61000-4-2)



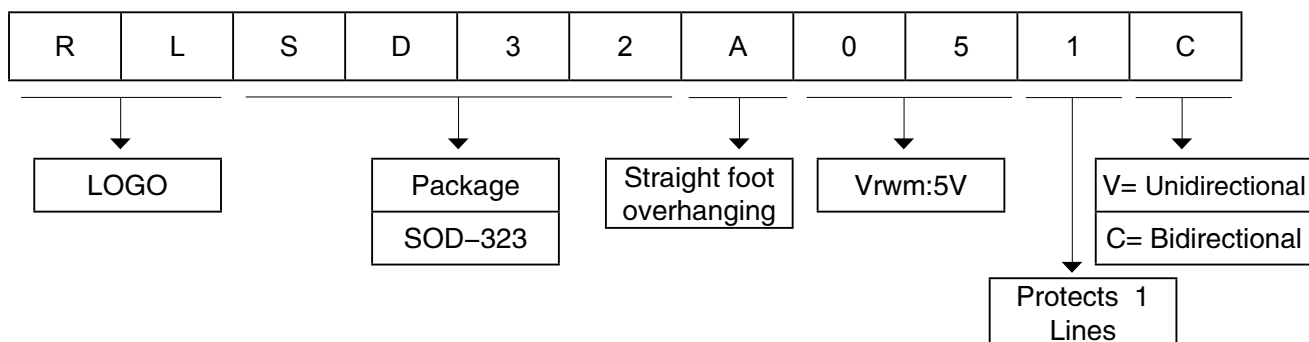
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Package dimension SOD-323



Dimensions				
Symbol	Inches		Millimeters	
	Min	Max	Min	Max
A	---	0.043	---	1.1
B	0.004	0.010	0.10	0.25
C	0.045	0.054	1.2	1.4
D	0.012	0.016	0.3	0.4
E	0.060	0.071	1.5	1.8
F	0.090	0.107	2.3	2.7
G	0.006	0.010	0.15	0.25

Part Number Code



Ordering Information

Part Number	Package	Min. Order Qty.
RLSD32AxxxC	SOD-323	3000pcs

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