

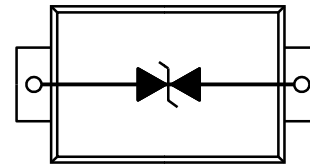
**Features**

- I 320 Watts Peak Pulse Power per Line (tp=8/20µs)
- I Protects one I/O or power line
- I Working voltages : 3.3V, 5V, 8V, 12V, 15V, 24V, 36V
- I Low clamping voltage
- I Low leakage current
- I IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- I IEC61000-4-4 (EFT) 40A (5/50ns)
- I IEC61000-4-5 (Lightning) 24A (8/20µs)



SOD-323

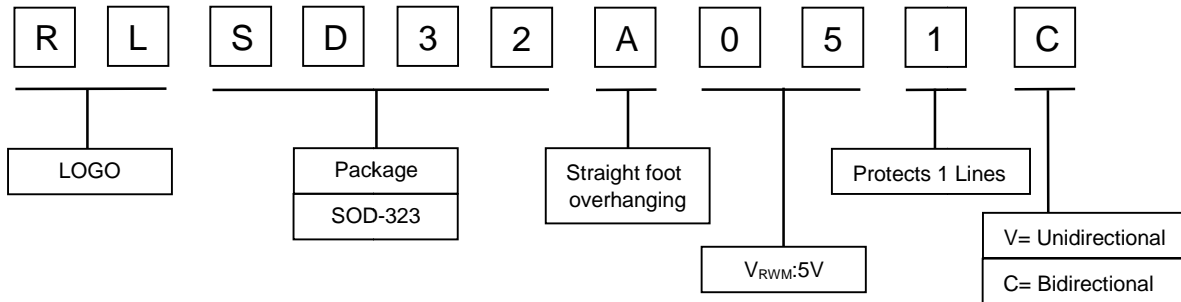
**Electrical symbol**



**Applications**

- I Cellular Handsets & Accessories
- I Personal Digital Assistants (PDAs)
- I Notebooks & Handhelds
- I Portable Instrumentation
- I Digital Cameras
- I MP3 Players

**Part Number Code**



**Absolute Maximum Rating**

Rating	Symbol	Value	Units
Peak Pulse Power (tp =8/20µs)	P <sub>PP</sub>	320	Watts
ESD Voltage (Contact)	V <sub>ESD</sub>	±8	Kv
ESD Voltage (Air)	V <sub>ESD</sub>	±15	Kv
Operating Temperature Range	T <sub>op</sub>	-55 to 150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to 150	°C
IEC61000-4-4 (EFT)		40	A
Maximum lead temperature for soldering during 10s	T <sub>L</sub>	260	°C

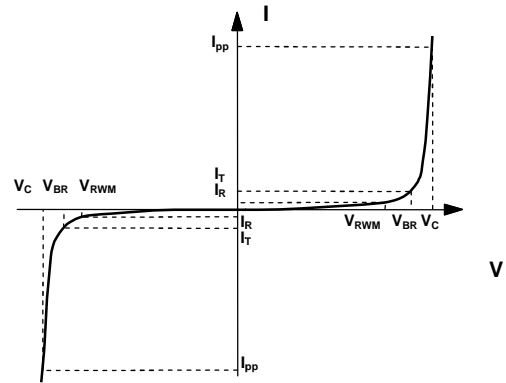


**Electrical Characteristics (@ 25°C Unless Otherwise Specified)**

Type Number	Reverse Stand-Off Voltage	Minimum Breakdown Voltage	Peak Pulse Voltage @8/20μS	V <sub>C</sub> @8/20μS		Reverse Leakage @V <sub>RWM</sub>	Typical Capacitance
	V <sub>RWM</sub>	V <sub>BR</sub> @1mA	V <sub>C</sub> @1A	(max.)	@I <sub>PP</sub>	I <sub>R</sub> @V <sub>RWM</sub>	DC=0V C <sub>J</sub> @ 1 MHz
	V	V	V	V	A	μA	pF
RLSD32A031C	3.3	4.0	7.5	10	32	1	70
RLSD32A051C	5.0	6.0	8.0	12	30	1	65
RLSD32A081C	8.0	8.5	12.0	20	18	1	55
RLSD32A121C	12.0	13.3	19.0	24	15	1	40
RLSD32A151C	15.0	16.7	24.0	29	12	1	30
RLSD32A241C	24.0	26.7	40.0	60	6	1	25
RLSD32A361C	36.0	40.0	50.0	75	4	1	20

**Electrical Parameters (T=25°C)**

Symbol	Parameter
I <sub>PP</sub>	Maximum Reverse Peak Pulse Current
V <sub>C</sub>	Clamping Voltage @ I <sub>PP</sub>
V <sub>RWM</sub>	Working Peak Reverse Voltage
I <sub>R</sub>	Maximum Reverse Leakage Current @ V <sub>RWM</sub>
V <sub>BR</sub>	Breakdown Voltage @ I <sub>T</sub>
I <sub>T</sub>	Test Current



**Characteristic Curves**

Fig 1. 8/20μs Pulse Waveform

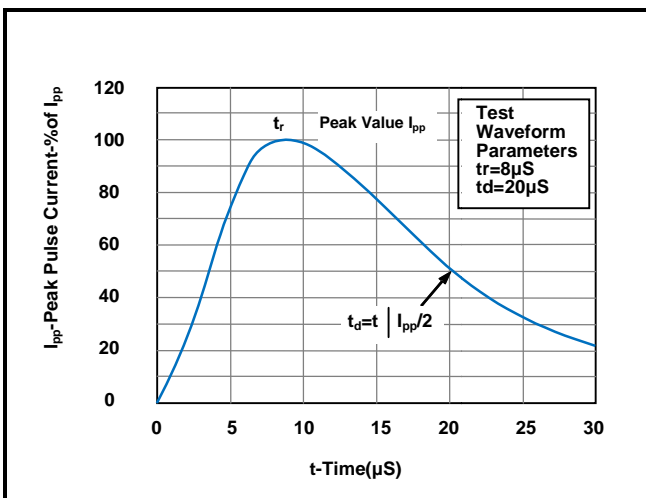


Fig2.ESD Pulse Waveform (according to IEC61000-4-2)

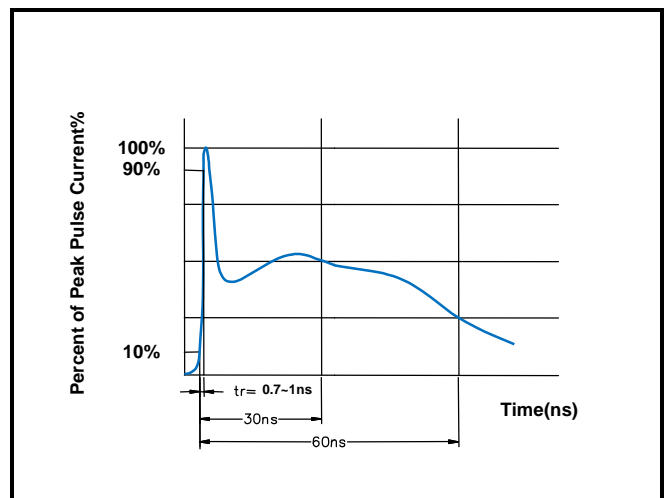


Fig 3. Power Derating Curve

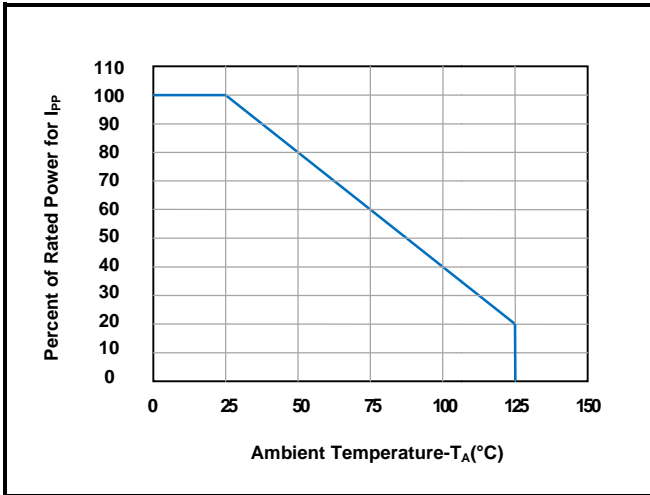
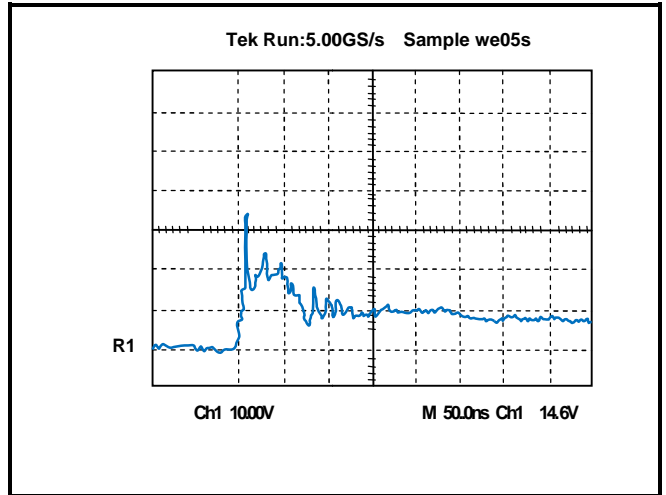
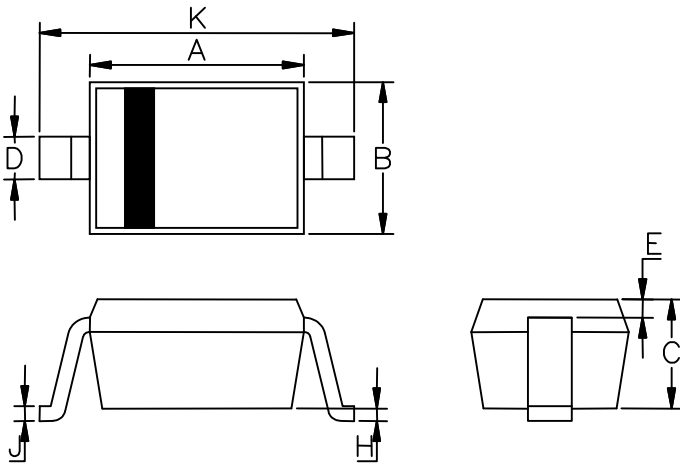


Figure 4.ESD Clamping(8KV Contact per IEC61000-4-2)



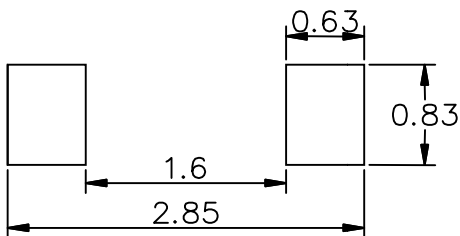
**Dimensions**



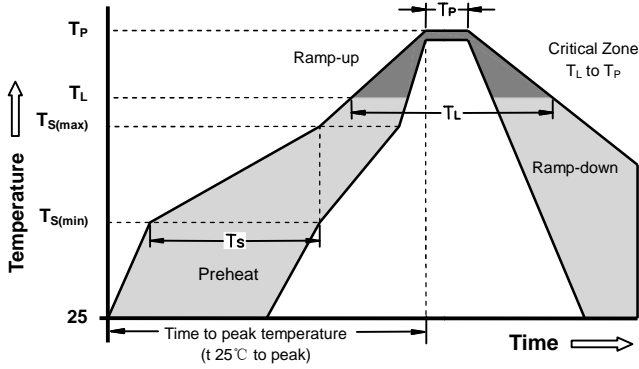
DIM	Millimeters		Inches	
	Min	Max	Min	Max
A	1.60	1.80	0.063	0.071
B	1.15	1.35	0.045	0.053
C	0.80	1.00	0.031	0.039
D	0.25	0.40	0.010	0.016
E	0.15 REF		0.006 REF	
H	0.00	0.10	0.000	0.004
J	0.09	0.18	0.004	0.007
K	2.30	2.70	0.091	0.106

Part Number	Packaging	Quantity	Component package	Molding compound flammability rating	Lead Finish
RLSD32AXX1C	Tape and Reel	3000	SOD-323	UL 94V-0	Lead Free

**Mounting PAD (mm)**



**Soldering Parameters - Reflow Soldering (Surface Mount Devices)**



<b>Reflow Condition</b>		Pb - Free assembly
<b>Pre Heat</b>	-Temperature Min ( $T_{s(min)}$ )	150°C
	-Temperature Max ( $T_{s(max)}$ )	200°C
	- Time (min to max) ( $t_s$ )	60 -180 Seconds
<b>Average ramp up rate ( Liquids Temp <math>T_L</math>) to peak</b>		3°C/second max
<b><math>T_{s(max)}</math> to <math>T_L</math> - Ramp-up Rate</b>		3°C/second max
<b>Reflow</b>	- Temperature ( $T_L$ ) (Liquids)	217°C
	- Time (min to max) ( $t_s$ )	60 -150 Seconds
<b>Peak Temperature (<math>T_P</math>)</b>		260 +0/-5°C
<b>Time within 5°C of actual peak Temperature (<math>t_p</math>)</b>		20 - 40 Seconds
<b>Ramp-down Rate</b>		6°C/second max
<b>Time 25°C to peak Temperature (<math>T_P</math>)</b>		8 minutes Max
<b>Do not exceed</b>		280°C

