

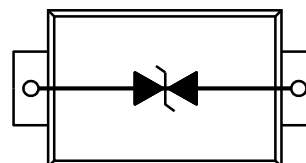
**Features**

- I 320 Watts Peak Pulse Power (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) ±30kV (air), ±30kV (contact)
- I IEC61000-4-4 (EFT) 40A (5/50ns)



SOD-323

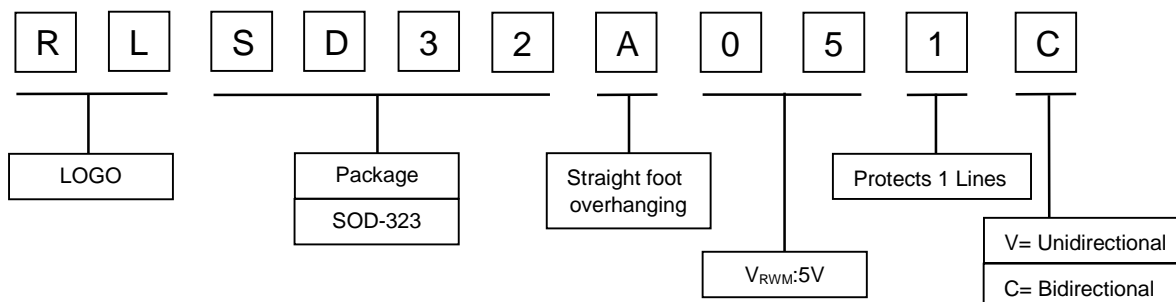
**Electrical symbol**



**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**

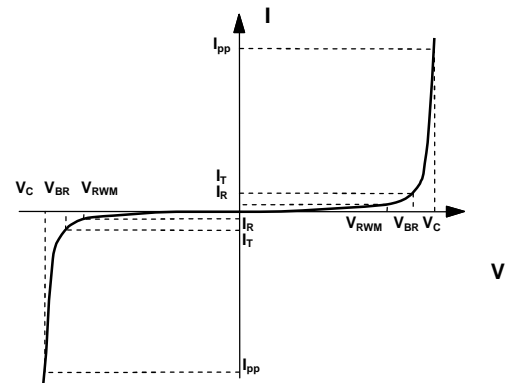
Rating	Symbol	Value	Units
Peak Pulse Power (tp =8/20µs)	P <sub>PP</sub>	320	Watts
ESD Voltage (Contact)	V <sub>ESD</sub>	±30	Kv
ESD Voltage (Air)	V <sub>ESD</sub>	±30	Kv
Operating Temperature Range	T <sub>op</sub>	-55 to 150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to 150	°C
IEC61000-4-4 (EFT)		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	80
RLSD32A051C	5.0	6	8	12	30	1	75
RLSD32A081C	8.0	8.5	12	20	18	1	65
RLSD32A121C	12.0	13.3	19	24	15	1	30
RLSD32A151C	15.0	16.7	24	29	12	1	30
RLSD32A241C	24.0	26.7	40	60	6	1	20
RLSD32A361C	36.0	40	50	75	4	1	20

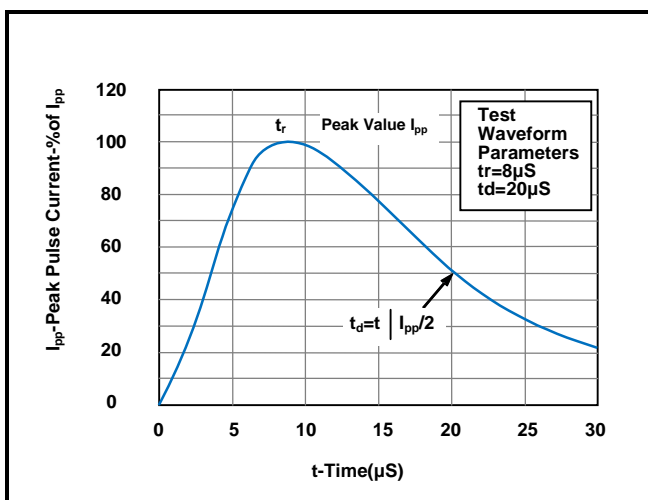
**Electrical Parameters (T=25°C)**

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)**

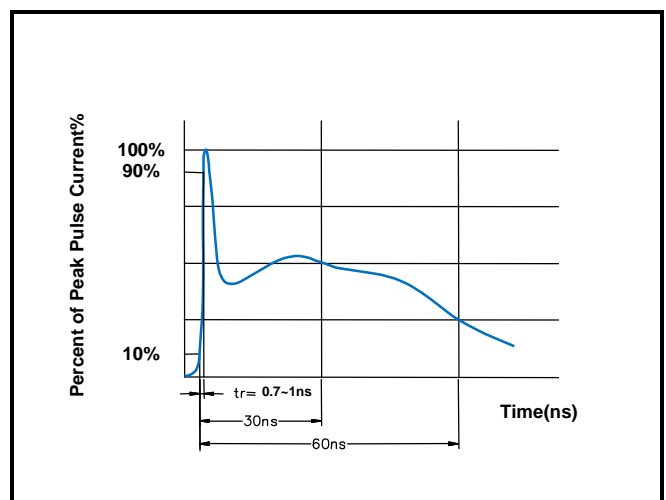


Fig 3. Power Derating Curve

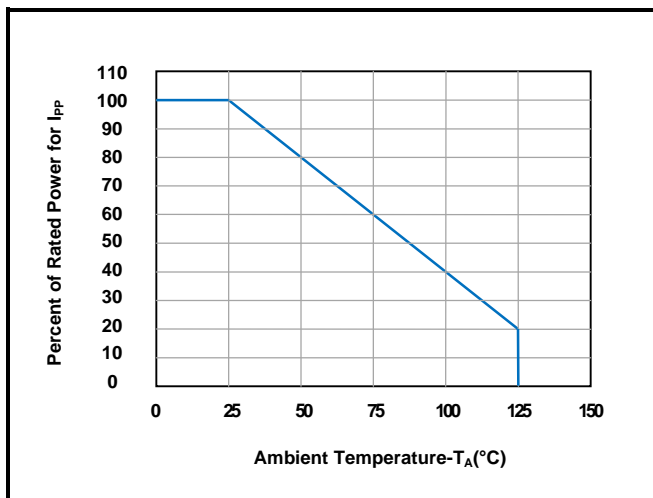
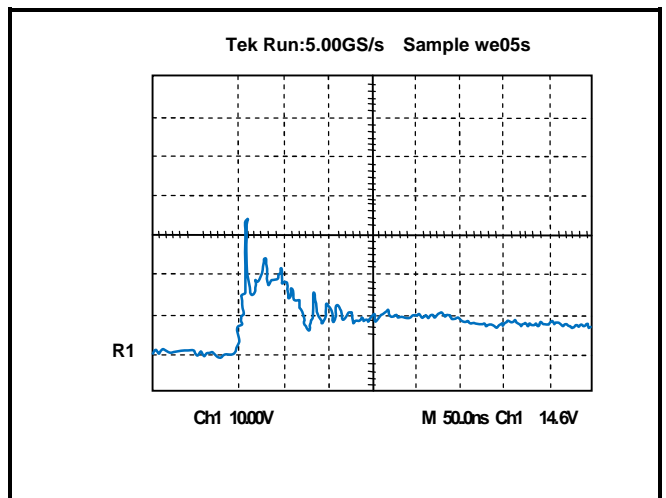
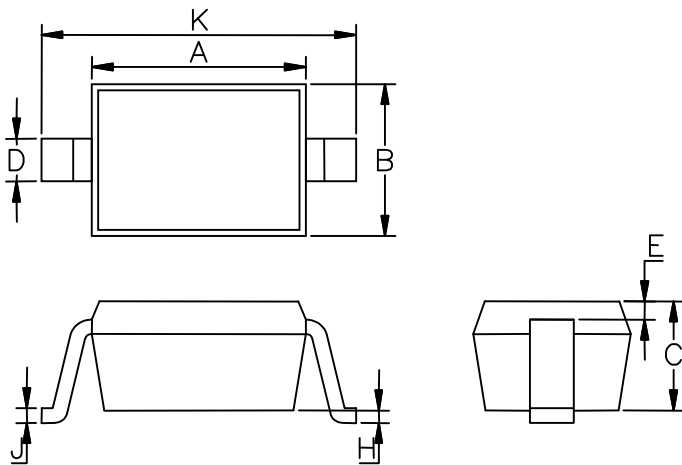


Figure 4.ESD Clamping(8KV Contact per IEC61000-4-2)



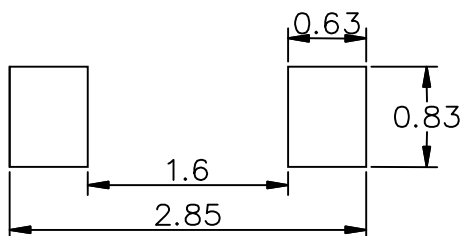
Dimensions



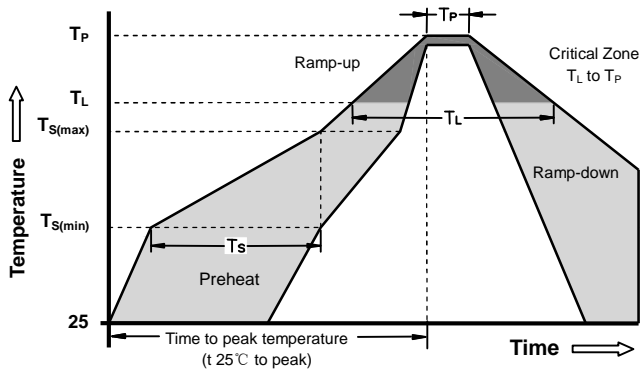
DIM	Millimeters		Inches	
	Min	Max	Min	Max
A	1.60	1.80	0.063	0.071
B	1.15	1.35	0.045	0.053
C	0.80	1.00	0.031	0.039
D	0.25	0.40	0.010	0.016
E	0.15 REF		0.006 REF	
H	0.00	0.10	0.000	0.004
J	0.09	0.18	0.004	0.007
K	2.30	2.70	0.091	0.106

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)**



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 $T_L$ - 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