

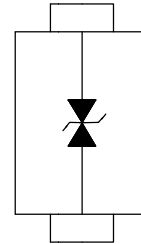
Features

- I 500 Watts peak pulse power (tp = 8/20μs)
- I Protects one I/O or power line
- I Low clamping voltage
- I Working voltage: 18V
- I Low leakage current
- I Solid-state silicon-avalanche technology



SOD-323

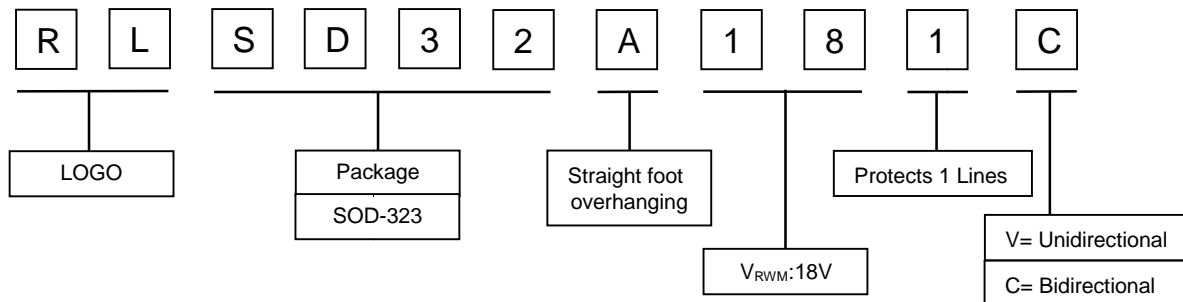
Electrical symbol



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 _{PP}	500	Watts
ESD Voltage (Contact)	V _{ESD}	±30	kV
ESD Voltage (Air)	V _{ESD}	±30	kV
Operating Temperature	T _J	-55 to 150	°C
Storage Temperature	T _{STG}	-55 to 150	°C

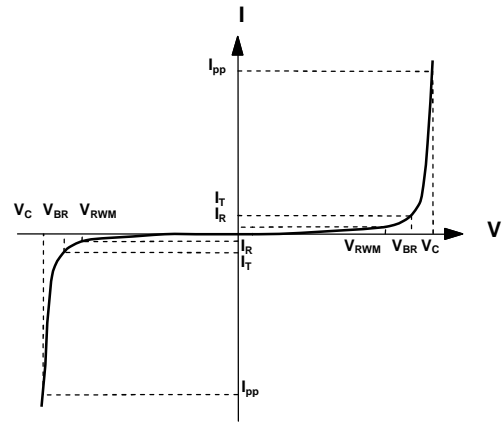


Electrical Characteristics (@ 25°C Unless Otherwise Specified)

Type Number	Reverse Stand-Off Voltage	Minimum Breakdown Voltage	Peak Pulse Voltage @8/20μS	V _C (Max.)		Reverse Leakage @V _{RWM}	Typical Capacitance
	V _{RWM}	V _{BR} @1mA	V _C @1A			I _R @V _{RWM}	
	V	V	V	V	@A	μA	DC=0V C _J @ 1 MHz pF
RLSD32A181C	18	19.8	25	38	13	0.2	60

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

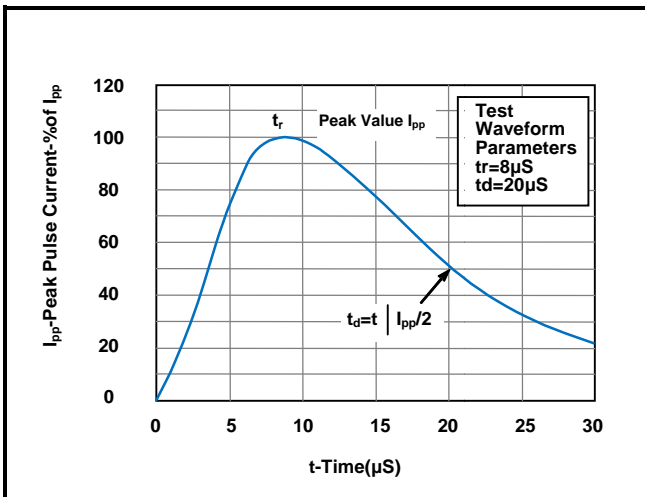
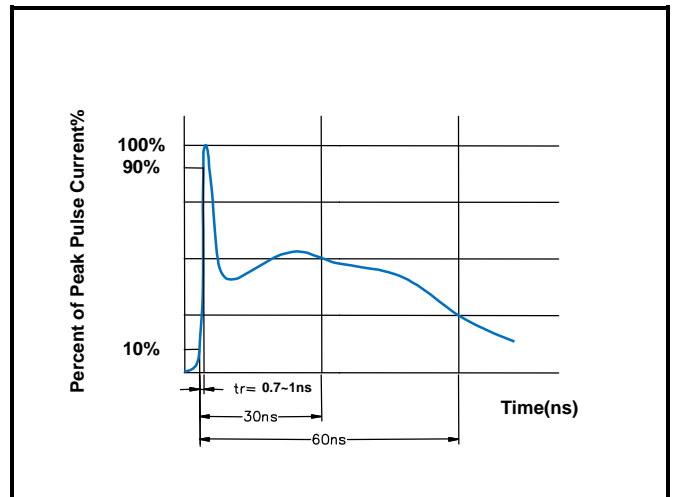
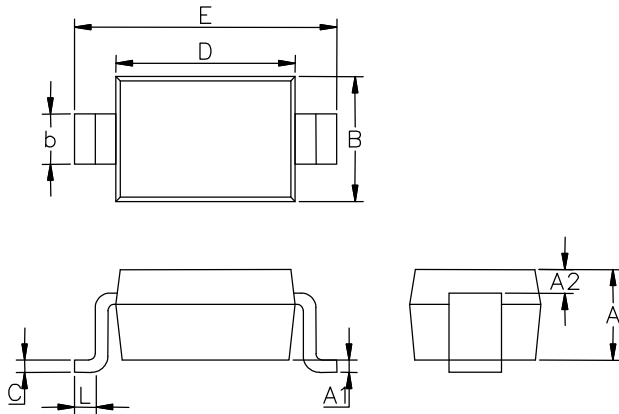


Fig2.ESD Pulse Waveform (according to IEC61000-4-2)

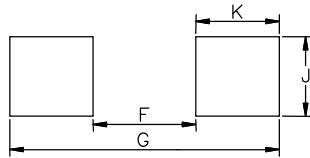


Dimensions



DIM	Millimeters		Inches	
	Min	Max	Min	Max
A	0.80	1.00	0.031	0.040
A1	0.00	0.10	0.000	0.004
A2	0.15REF		0.006REF	
b	0.25	0.40	0.010	0.016
B	1.15	1.35	0.045	0.053
C	0.089	0.177	0.003	0.007
D	1.60	1.80	0.062	0.070
E	2.30	2.70	0.090	0.105
L	0.08		0.003	

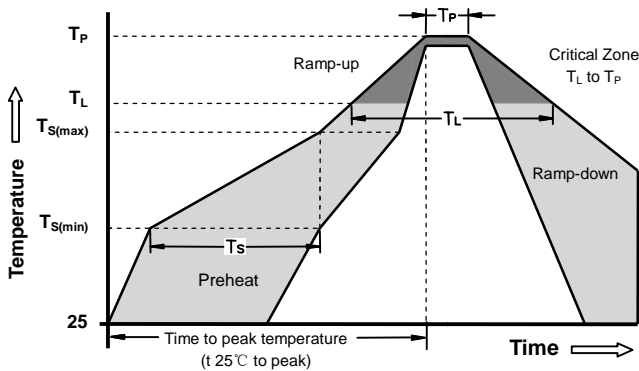
Soldering Footprint



DIM	Millimeters	Inches
F	1.60	0.063
G	2.85	0.112
J	0.83	0.033
K	0.63	0.025

Part Number	Component package	Quantity	Reel Size	Molding compound flammability rating	Lead Finish
RLSD32A181C	SOD-323	3000	7 inch	UL 94V-0	Lead Free

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

