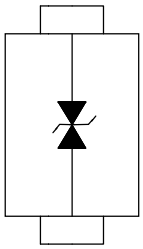
Features

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

SOD-323

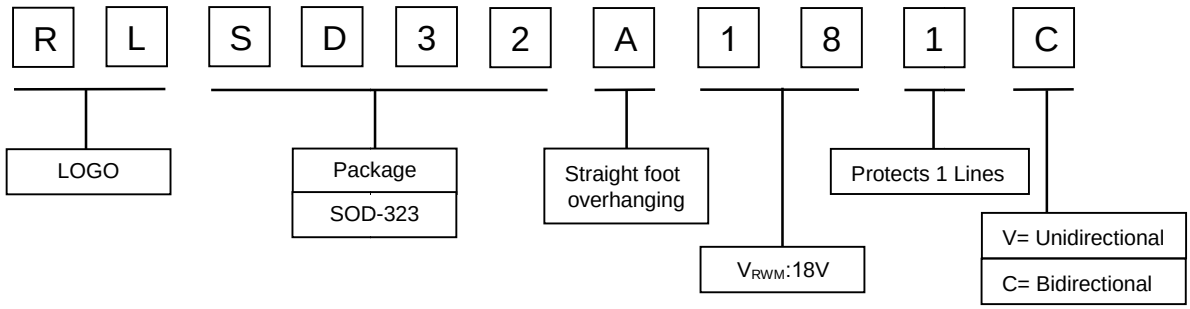
Electrical symbol



Applications

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

Part Number Code



Absolute Maximum Rating

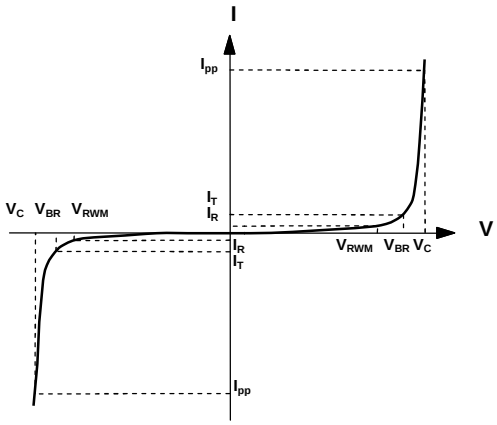
Rating	Symbol	Value	Units
Peak Pulse Power (tp =8/20μs)	P_{PP}	500	Watts
ESD Voltage (Contact)	V_{ESD}	±30	kV
ESD Voltage (Air)	V_{ESD}	±30	kV
Operating Temperature	T_J	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C

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}	DC=0V C_J@ 1 MHz
	V	V	V	V	@A	μA	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

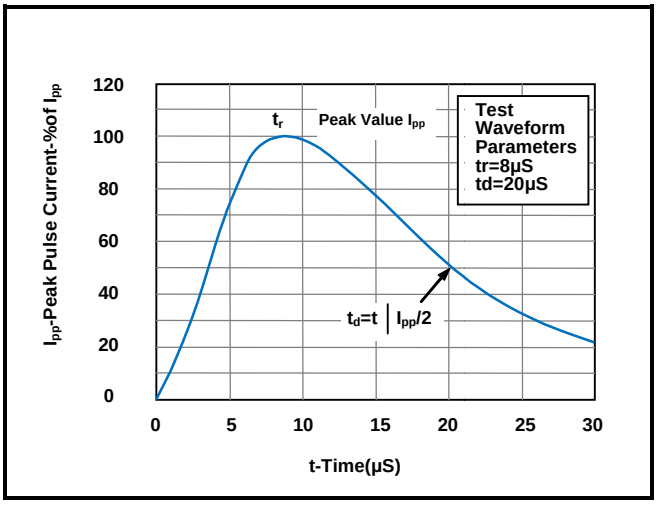
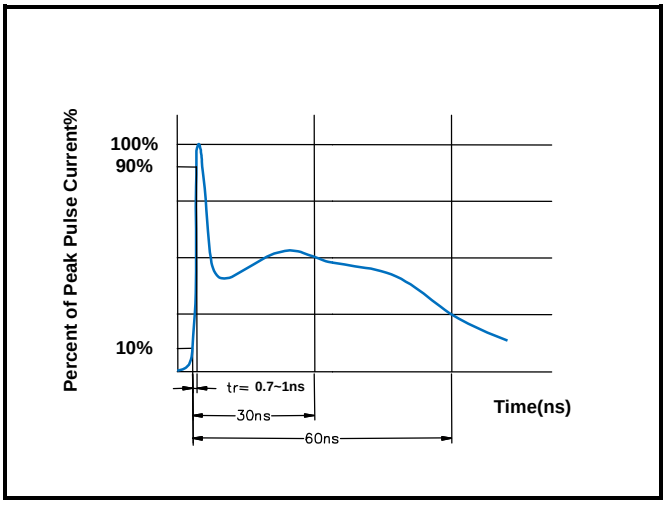
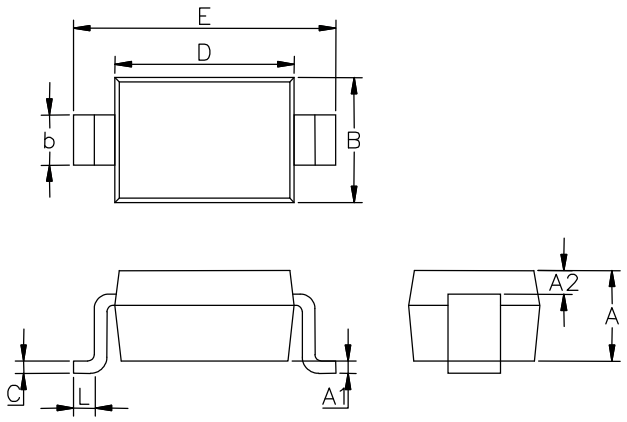


Fig2.ESD Pulse Waveform (according to IEC61000-4-2)

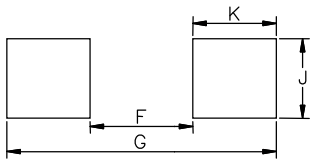


Dimensions



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	

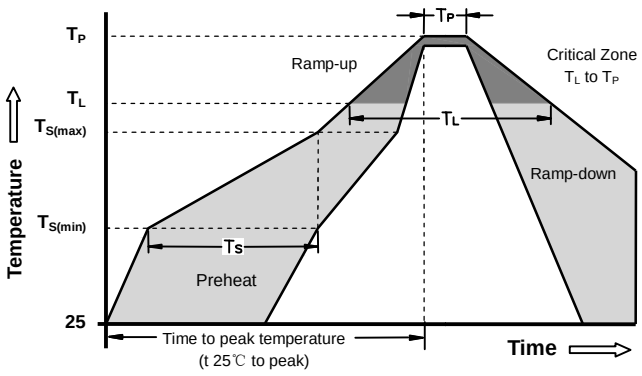
Soldering Footprint



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 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