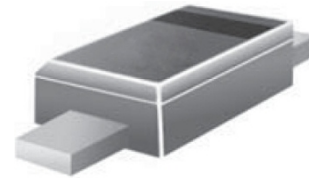


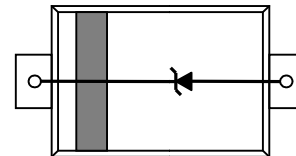
Features

- I 200 Watts Peak Pulse Power per Line (tp = 8/20µs)
- I Working voltages: 18V
- I Low Leakage Current
- I Low operating and clamping voltages
- I Lead Free/RoHS compliant
- I Solid-state silicon avalanche technology
- I Provides ESD protection to IEC61000-4-2(ESD): ±15kV (air discharge), ±8kV (contact discharge)



SOD-523

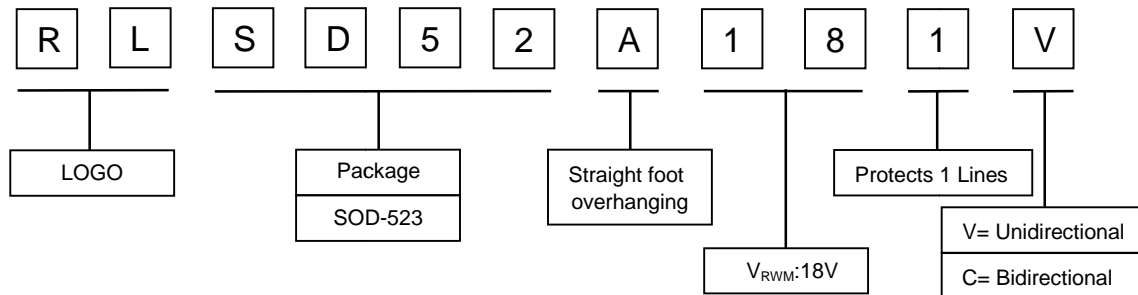
Electrical symbol



Applications

- I Cellular phones
- I Portable devices
- I Digital cameras
- I Power supplies

Part Number Code



Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power (tp =8/20µs)	P _{PK}	200	Watts
ESD Voltage (Contact)	V _{ESD}	±8	Kv
ESD Voltage (Air)	V _{ESD}	±15	Kv
Lead Soldering Temperature	T _L	260 (10 s)	°C
Operating Temperature Range	T _{OP}	-40 to 125	°C
Storage Temperature	T _{STG}	-55 to 150	°C

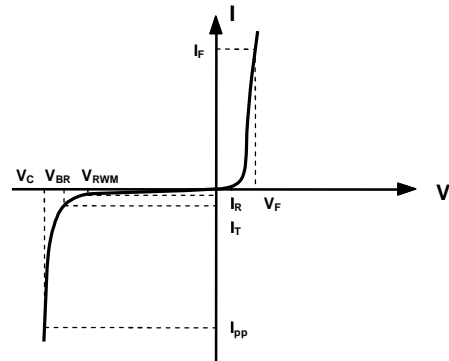
Electrical Characteristics (@ 25°C Unless Otherwise Specified)

Type Number	Reverse Stand-Off Voltage	Minimum Breakdown Voltage	Peak Pulse Voltage @8/20µS	Peak Pulse Current @8/20µS	Reverse Leakage @V _{RWM}	Typical Capacitance
	V _{RWM}	V _{BR} @1mA	V _C @8A	I _{PP}	I _R @V _{RWM}	DC=0V C _J @ 1 MHz
	V	V	V	A	µA	pF
RLSD52A181V	18.0	19.8	27	8	1.0	45



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

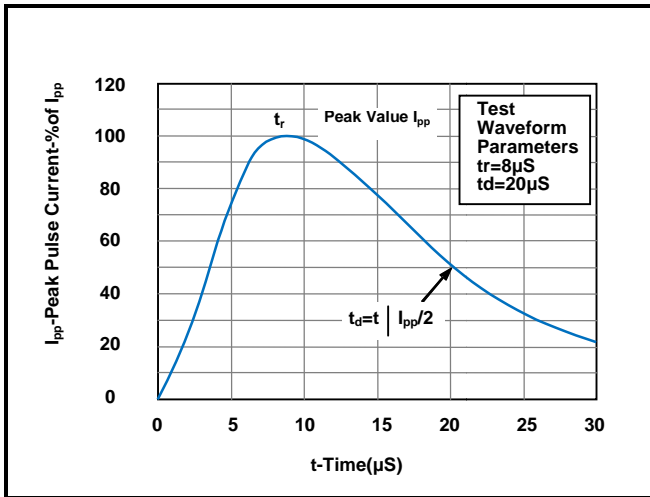


Fig 3. Power Derating Curve

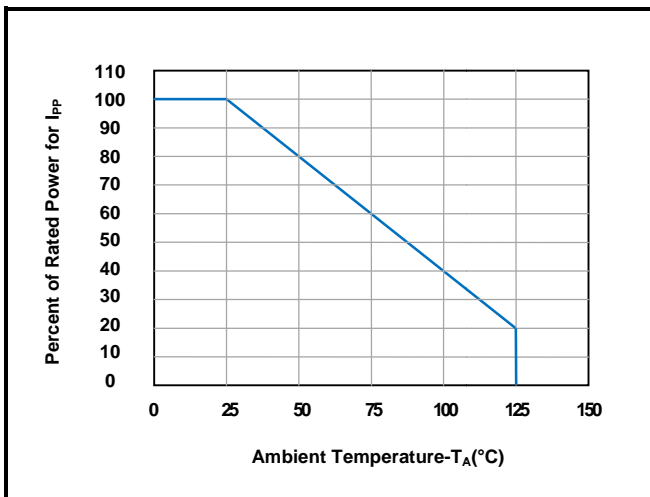


Fig2.ESD Pulse Waveform (according to IEC61000-4-2)

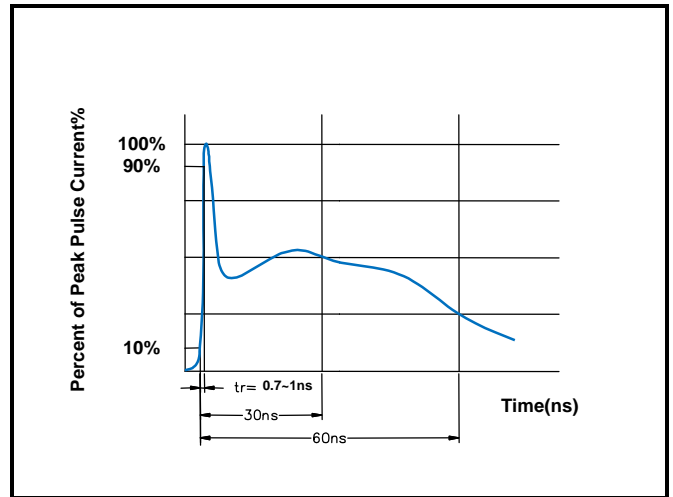
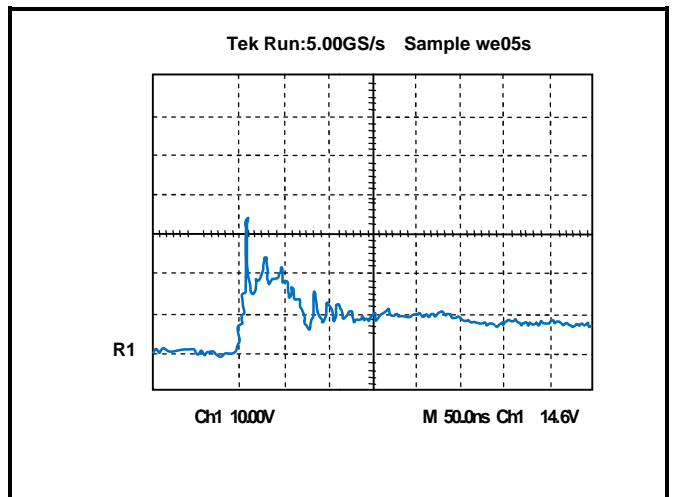
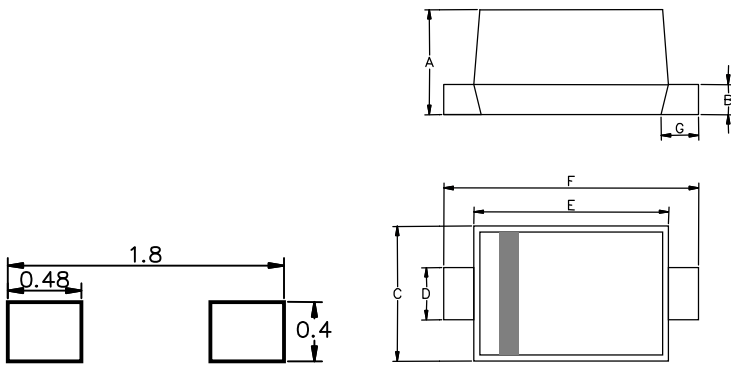


Figure 4.ESD Clamping(8KV Contact per IEC61000-4-2)

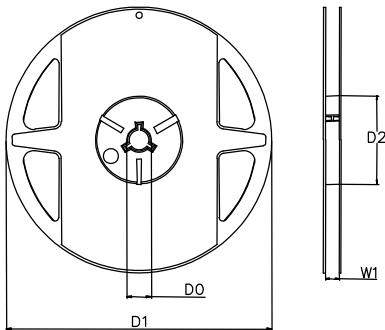


Dimensions & Recommended soldering footprint(mm)



DIM	Millimeters		Inches	
	Min	Max	Min	Max
A	0.5	0.7	0.020	0.028
B	0.07	0.2	0.003	0.008
C	0.7	0.9	0.028	0.035
D	0.25	0.35	0.010	0.014
E	1.1	1.3	0.043	0.051
F	1.5	1.7	0.059	0.067
G	0.15	0.25	0.006	0.010

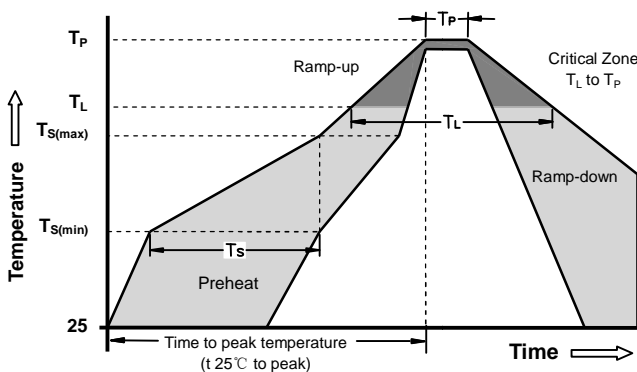
Reel Dimensions



DIM	Millimeters		Inches	
	Min	Max	Min	Max
D1	-	178	-	7.008
W1	8.4	9.9	0.331	0.39
D2	50	-	1.969	-
D0	20.2	-	0.795	-

Part Number	Marking	Component package	Quantity	Reel Size	Molding compound flammability rating	Lead Finish
RLSD52A181V	18U	SOD-523	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

