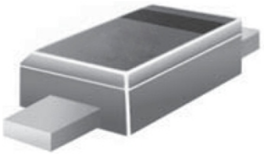
Features

- Working voltages: 5V
- Low Leakage Current
- Low operating and clamping voltages
- Lead Free/RoHS compliant
- Solid-state silicon avalanche technology
- Provides ESD protection to IEC61000-4-2(ESD): ±15kV (air discharge), ±15kV (contact discharge)

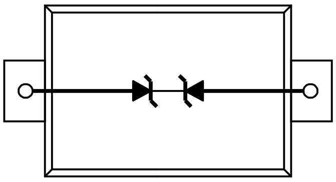


SOD-523

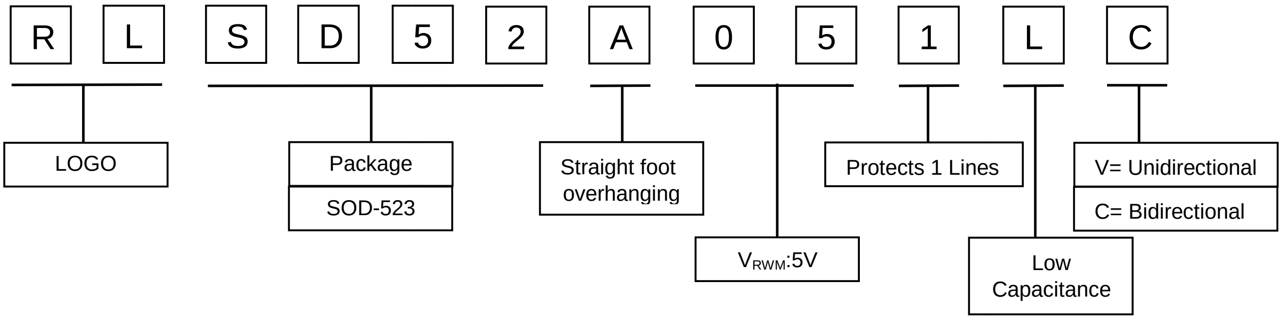
Applications

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA’s)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Pagers Peripherals

Electrical symbol



Part Number Code



Absolute Maximum Rating

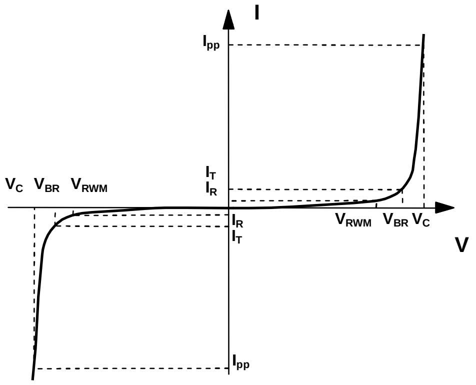
Rating	Symbol	Value	Units
ESD Voltage (Contact)	V_{ESD}	±15	kV
ESD Voltage (Air)	V_{ESD}	±15	kV
Lead Soldering Temperature	T_L	260 (10 sec.)	°C
Junction Temperature Range	T_J	-55 to 125	°C
Storage Temperature	T_{STG}	-55 to 150	°C

Electrical Characteristics (@ 25°C Unless Otherwise Specified)

Type Number	Reverse Stand-Off Voltage	Minimum Breakdown Voltage	V_C @8/20μS		Reverse Leakage @V_{RWM}	Typical Capacitance
	V_{RWM}	V_{BR} @1mA	(max.)	@I_{PP}	I_R@V_{RWM}	DC=0V C_J@ 1 MHz
	V	V	V	A	μA	pF
RLSD52A051LC	5.0	5.4	12.9	3	1.0	0.5

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



Characteristic Curves

Fig 1. 8/20μs Pulse Waveform

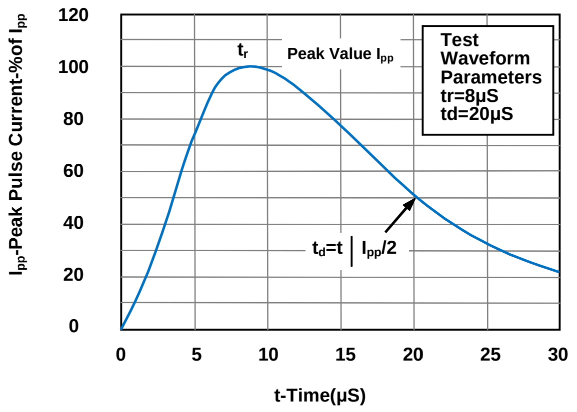


Fig2.ESD Pulse Waveform (according to IEC61000-4-2)

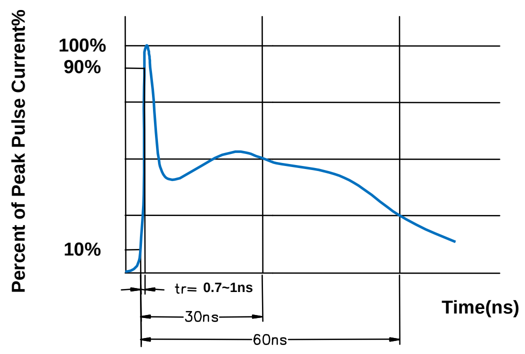


Fig 3. Power Derating Curve

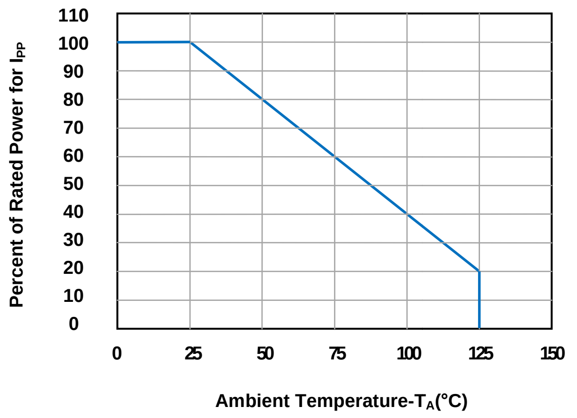
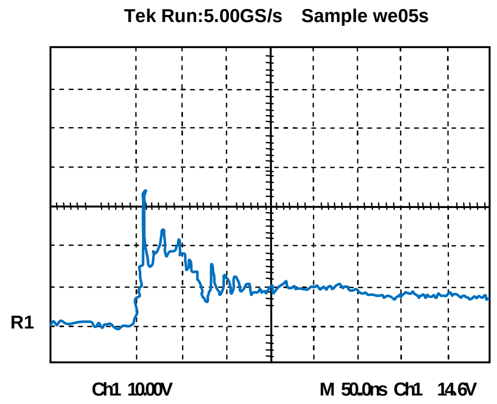
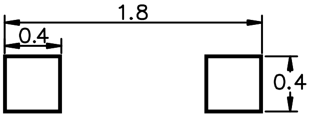
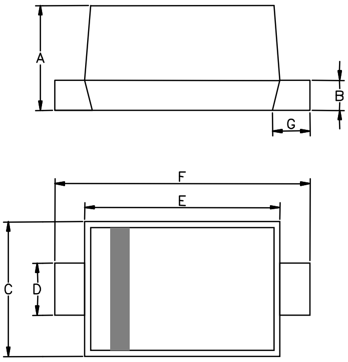


Figure 4.ESD Clamping(8KV Contact per IEC61000-4-2)



Dimensions & Recommended soldering footprint(mm)

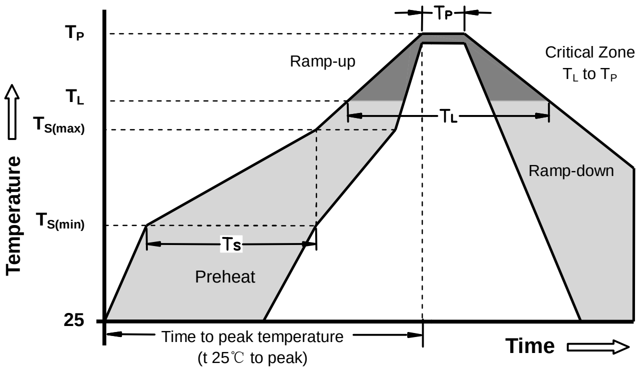




DIM	Millimeters		Inches	
	Min	Max	Min	Max
A	0.5	0.7	0.020	0.028
B	0.07	0.2	0.003	0.008
C	0.7	0.9	0.028	0.035
D	0.25	0.35	0.010	0.014
E	1.1	1.3	0.043	0.051
F	1.5	1.7	0.059	0.067
G	0.15	0.25	0.006	0.010

Part Number	Component package	Quantity	Reel Size	Molding compound flammability rating	Lead Finish
RLSD52A051LC	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 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