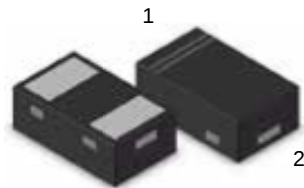
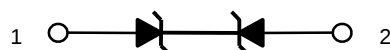


Features

- 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): $\pm 15\text{kV}$ (air discharge), $\pm 10\text{kV}$ (contact discharge)



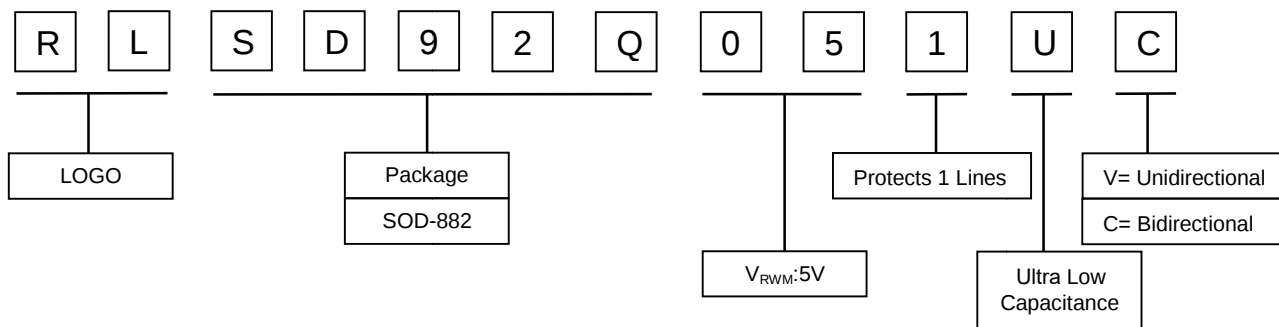
Electrical symbol



Applications

- Video I/O ports protection
- Set Top Boxes
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Pagers Peripherals

Part Number Code



Absolute Maximum Rating

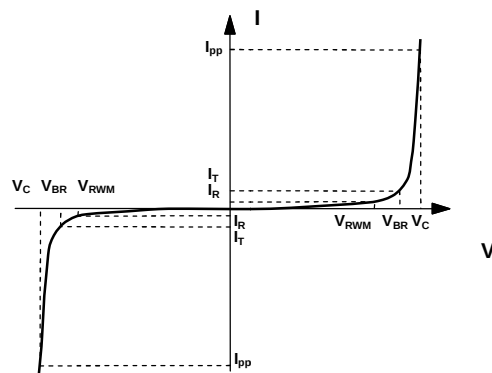
Rating	Symbol	Value	Units
ESD Voltage (Contact)	V_{ESD}	± 10	kV
ESD Voltage (Air)	V_{ESD}	± 15	kV
Lead Soldering Temperature	T_L	260 (10 sec.)	$^{\circ}\text{C}$
Operating Temperature	T_J	-55 to 125	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to 150	$^{\circ}\text{C}$

Electrical Characteristics (@ 25°C Unless Otherwise Specified)

Type Number	Reverse Stand-Off Voltage	Minimum Breakdown Voltage	Peak Pulse Voltage @8/20 μs	Reverse Leakage @ V_{RWM}	Typical Capacitance	
	V_{RWM}	$V_{BR} @1\text{mA}$	$V_C @5\text{A}$	$I_R @V_{RWM}$	DC=0V	$C_J @ 1 \text{ MHz}$
	V	V	V	μA	pF	
RLSD92Q051UC	5	6.0	11(Max)	0.1(Max)	0.25(Typ)	0.55(Max)

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

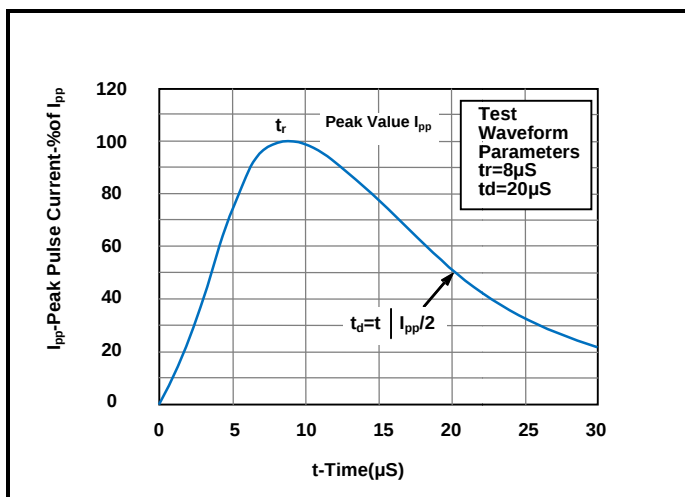


Fig 3. Power Derating Curve

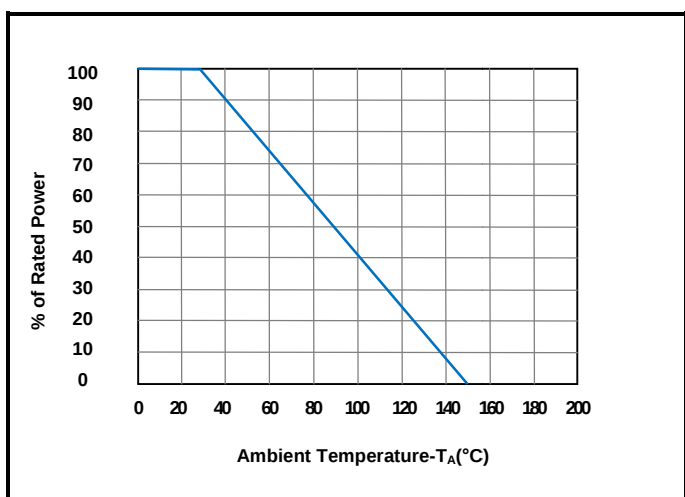


Fig2.ESD Pulse Waveform (according to IEC61000-4-2)

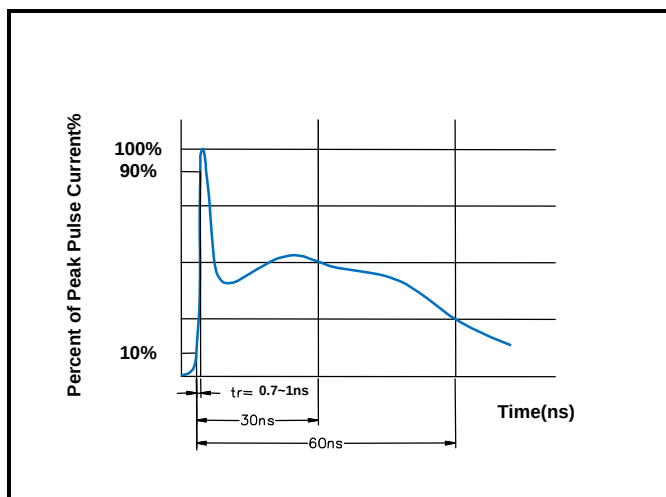
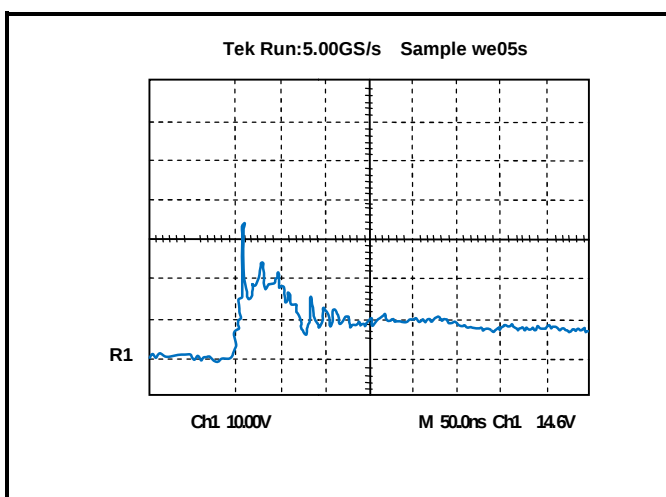
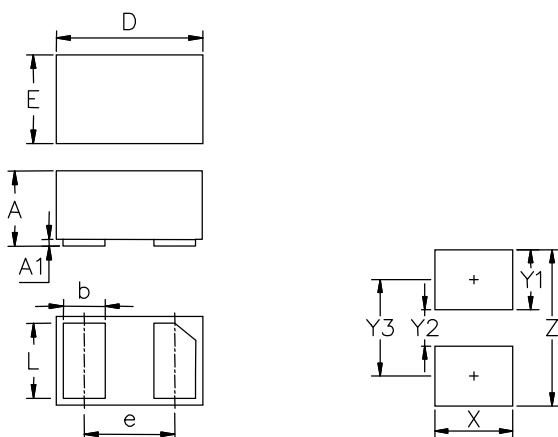


Figure 4.ESD Clamping(8KV Contact per IEC61000-4-2)



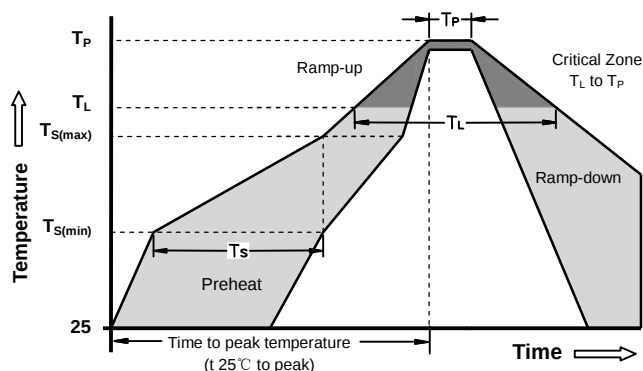
Dimensions & Recommended soldering footprint(mm)



DIM	Millimeters		Inches	
	Min	Max	Min	Max
A	0.45	0.55	0.018	0.022
A1	-	0.05	-	0.002
D	0.95	1.05	0.037	0.041
E	0.55	0.65	0.022	0.026
b	0.20	0.30	0.008	0.012
L	0.45	0.55	0.018	0.022
e	0.65 BSC		0.026 BSC	
X	0.60		0.024	
Y1	0.50		0.020	
Y2	0.30		0.012	
Y3	0.80		0.032	
Z	1.30		0.052	

Part Number	Component package	Marking	Quantity	Reel Size	Molding compound flammability rating	Lead Finish
RLSD92Q051UC	SOD-882	21	10000	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

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