Features

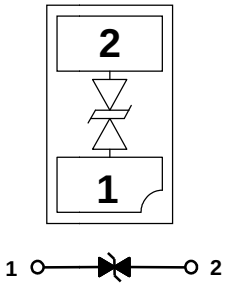
- 30 Watts Peak Pulse Power (tp = 8/20μs)
- Working voltages:5V
- Low Leakage Current
- Low operating and clamping voltages
- Lead Free/RoHS compliant
- Solid-state silicon avalanche technology
- Meet IEC61000-4-2 Level 4: contact discharge > 8 kV , air discharge > 15kV



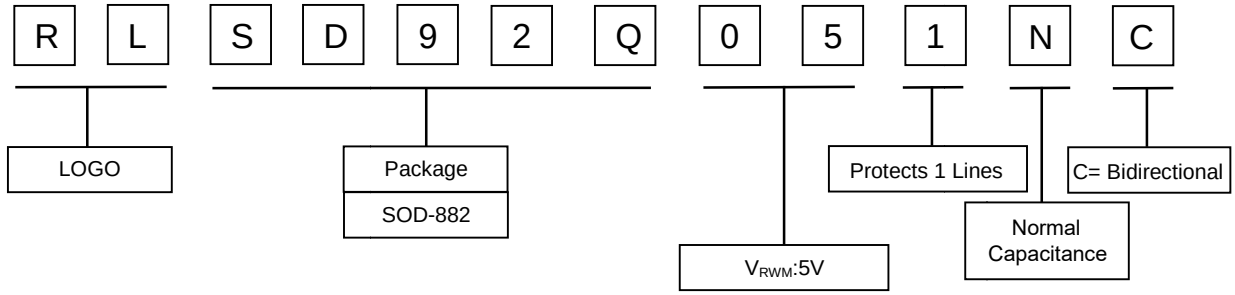
Applications

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

Electrical symbol



Part Number Code



Absolute Maximum Rating

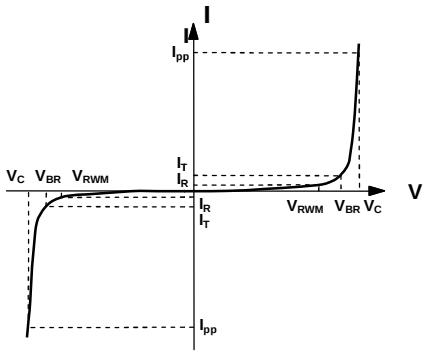
Rating	Symbol	Value	Units
Max. Peak Pulse Power (tp =8/20μs)	P_{PK}	30	Watts
ESD Voltage (Contact)	V_{ESD}	8	kV
ESD Voltage (Air)	V_{ESD}	15	kV
Operating Temperature	T_J	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C

Electrical Characteristics (@ 25°C Unless Otherwise Specified)

Type Number	Reverse Stand-Off Voltage	Minimum Breakdown Voltage	Peak Pulse Voltage @8/20μS	V_C @8/20μS		Reverse Leakage @V_{RWM}	Typical Capacitance
	V_{RWM}	V_{BR} @1mA	V_C@1A	(max.)	@I_{PP}	I_R@V_{RWM}	DC=0V C_J@ 1 MHz
	V	V	V	V	A	μA	pF
RLSD92Q051NC	5	5.5	8	10	3	0.5	4.0

Electrical Parameters (T=25°C)

Symbol	Parameter
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

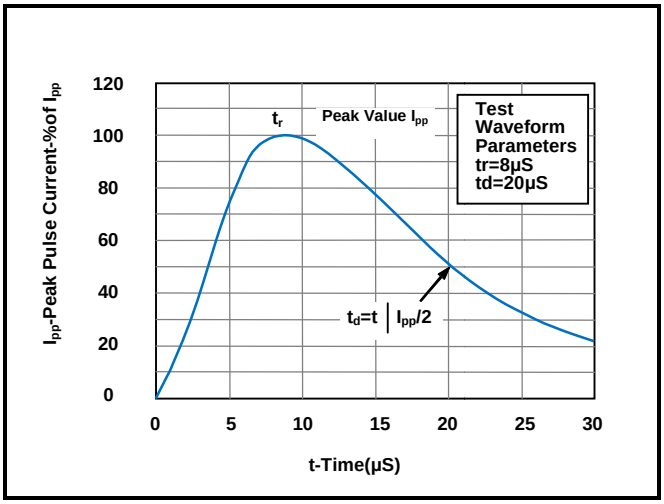


Fig2.ESD Pulse Waveform (according to IEC61000-4-2)

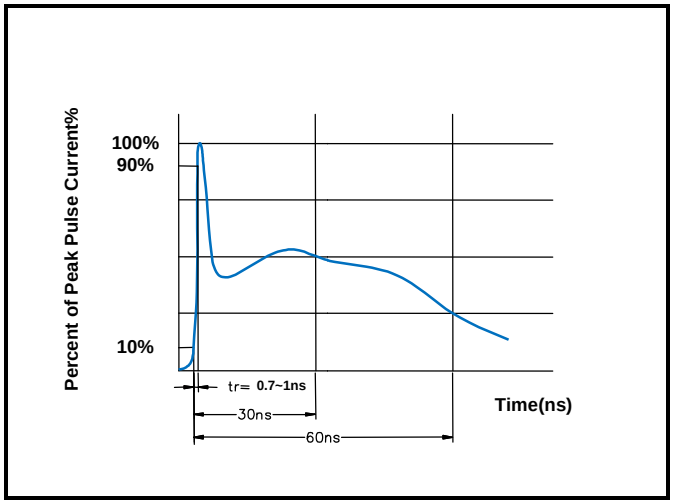


Fig 3. Power Derating Curve

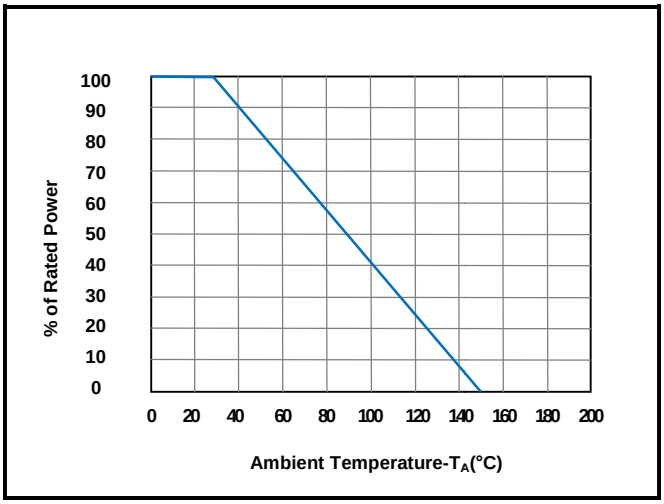
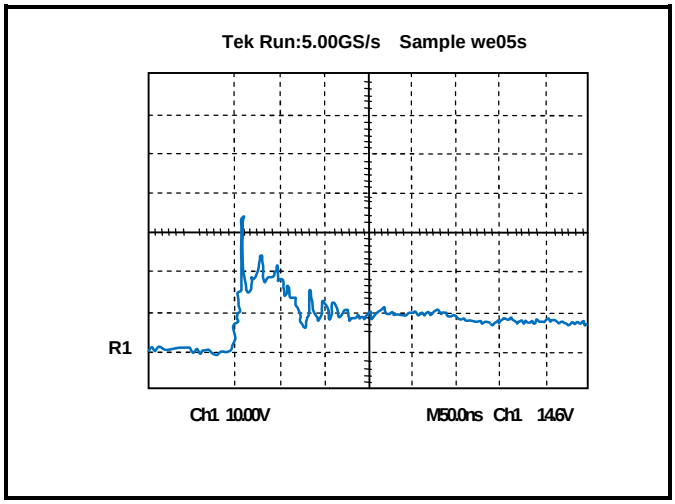
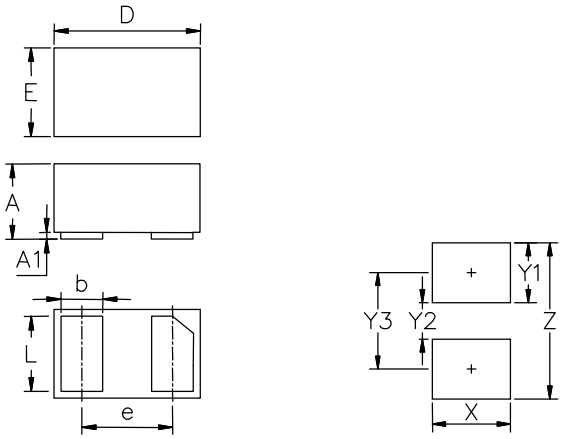


Figure 4.ESD Clamping(8KV Contact per IEC61000-4-2)



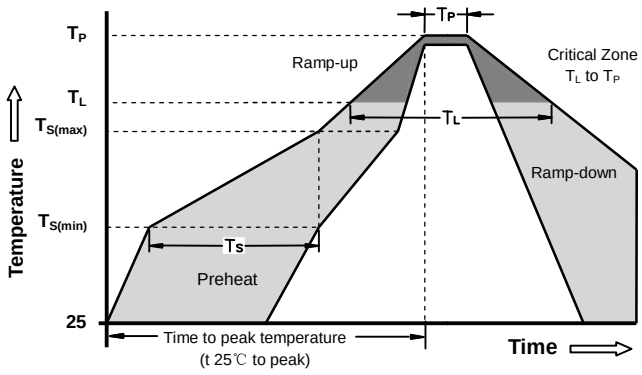
Dimensions & Recommended soldering footprint(mm)



DIM	Millimeters		Inches	
	Min	Max	Min	Max
A	0.45	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	Quantity	Reel Size	Molding compound flammability rating	Lead Finish
RLSD92Q051NC	SOD-882	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 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