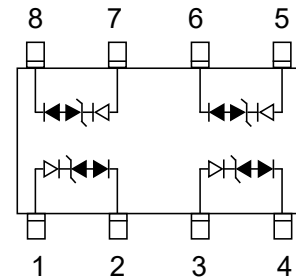


Description

The SLVU2.8-4 is low capacitance transient voltage suppressor for high speed data interface that designed to protect sensitive electronics from damage or latch-up due to ESD lightning, and other voltage induced transient events. All pins are rated to withstand 15kV ESD pulses using the IEC 61000-4-2 air discharge method, which can meet the requirement of level 4.



Feature

- 500W peak pulse power ($t_P = 8/20\mu s$)
- SOP-8 package
- Working voltage: 2.8V
- Low clamping voltage
- Low capacitance
- RoHS compliant transient protection for high speed data lines to IEC61000-4-2(ESD), $\pm 15kV$ (air), $\pm 8kV$ (contact)

Applications

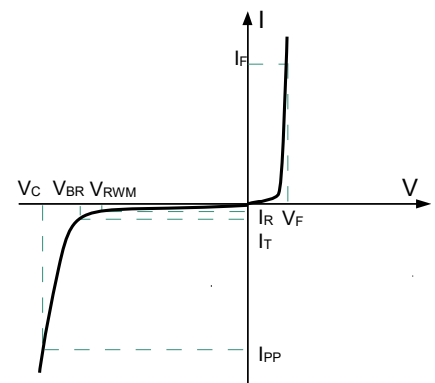
- Video/Audio input
- WAN/LAN equipment
- Personal digital assistant (PDA)
- Ethernet - 10/100/1000 base T

Mechanical Characteristics

- Lead finish:100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature:260°C
- Device meets MSL 1 requirements
- Pure tin plating: 7 ~ 17 μm
- Pin flatness: $\leq 3mil$

Electronics Parameter

Symbol	Parameter
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
P_{PP}	Peak Pulse Power
C_J	Junction Capacitance
I_F	Forward Current
V_F	Forward Voltage @ I_F



Electrical characteristics per line@25°C (unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Peak Reverse Working Voltage	V_{RWM}				2.8	V
Breakdown Voltage	V_{BR}	$I_t = 1mA$	3.0	3.4		V
Reverse Leakage Current	I_R	$V_{RWM} = 2.8V$			1	μA
Clamping Voltage	V_C	$I_{PP} = 1A, t_p = 8/20\mu s$			5.0	V
Clamping Voltage	V_C	$I_{PP} = 5A, t_p = 8/20\mu s$			7.5	V
Clamping Voltage	V_C	$I_{PP} = 20A, t_p = 8/20\mu s$			12.0	V
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz$		3.5		pF

Absolute maximum rating@25°C

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{pp}	500	W
Operating Temperature	T_J	-55 to +150	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Typical Characteristics

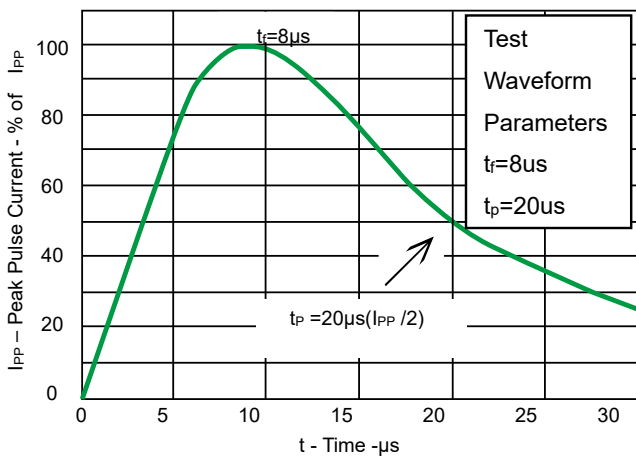


Fig 1.Pulse Waveform

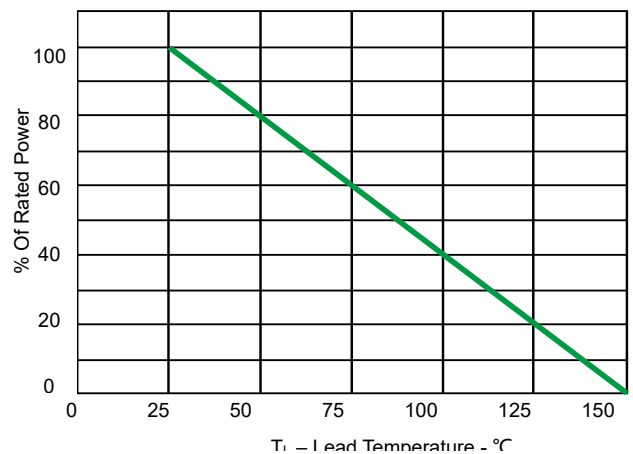
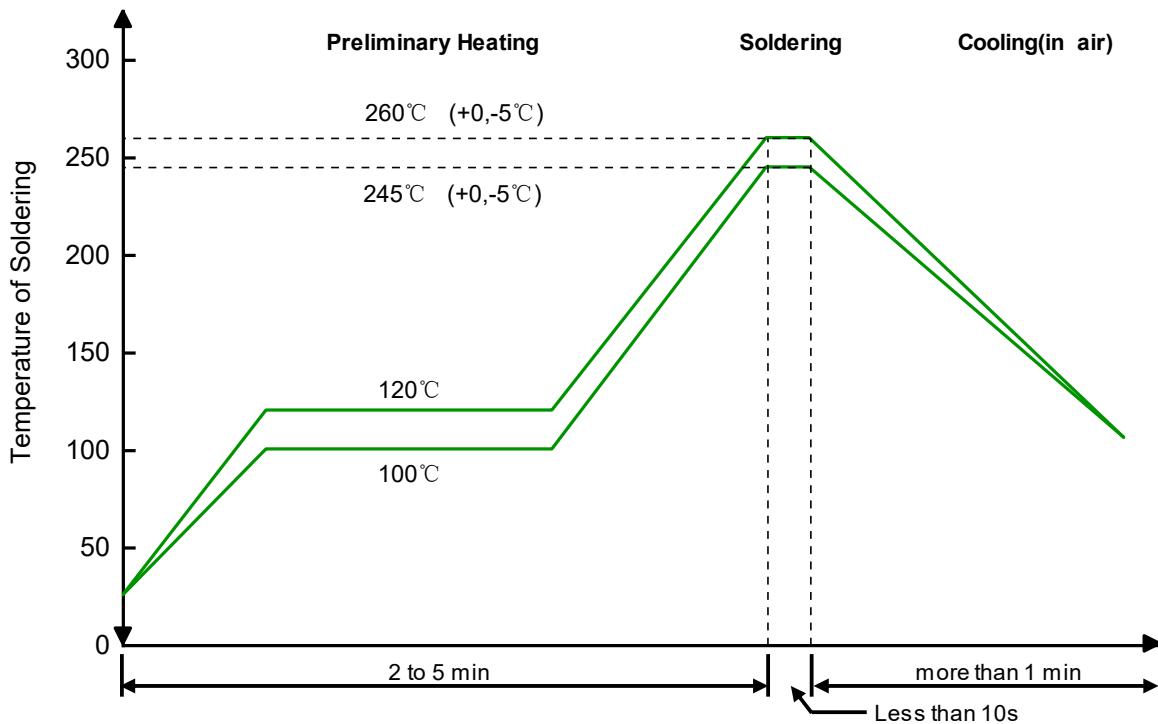


Fig 2.Power Derating Curve

Solder Reflow Recommendation



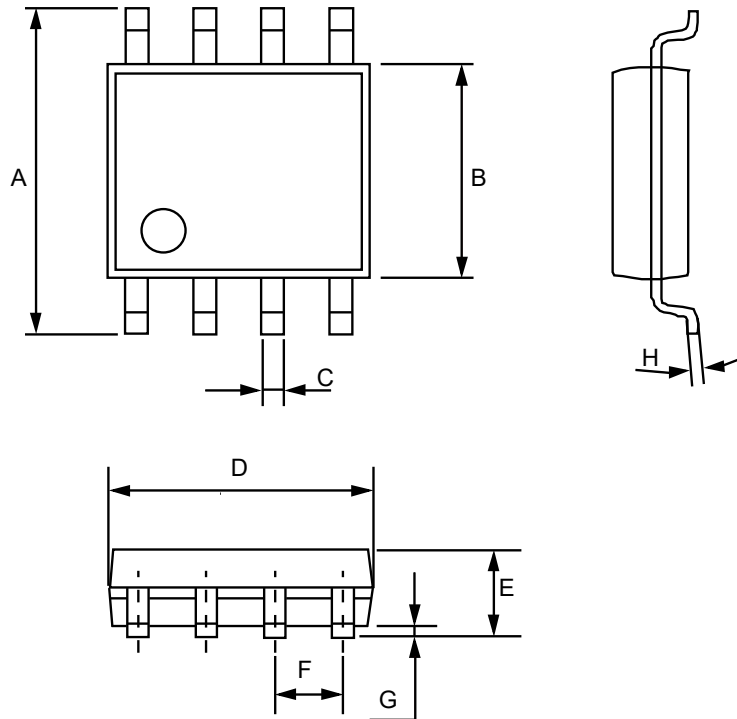
Remark: Pb free for 260°C; Pb for 245°C.

PCB Design

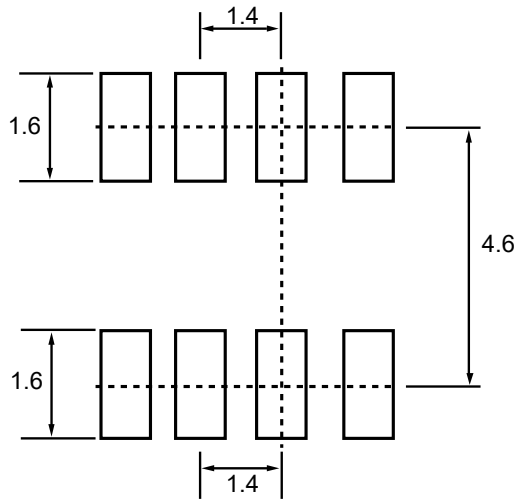
For TVS diodes a low-ohmic and low-inductive path to chassis earth is absolutely mandatory in order to achieve good ESD protection. Novices in the area of ESD protection should take following suggestions to heart:

- Do not use stubs, but place the cathode of the TVS diode directly on the signal trace.
- Do not make false economies and save copper for the ground connection.
- Place via holes to ground as close as possible to the anode of the TVS diode.
- Use as many via holes as possible for the ground connection.
- Keep the length of via holes in mind! The longer the more inductance they will have.

Product dimension (SOP-8)



Dim	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	5.800	6.200	0.228	0.244
B	3.800	4.000	0.150	0.157
C	0.330	0.510	0.013	0.020
D	4.700	5.100	0.185	0.200
E	1.350	1.750	0.053	0.069
F	1.270 (BSC)		0.050 (BSC)	
G	0.100	0.250	0.004	0.010
H	0.170	0.250	0.006	0.010

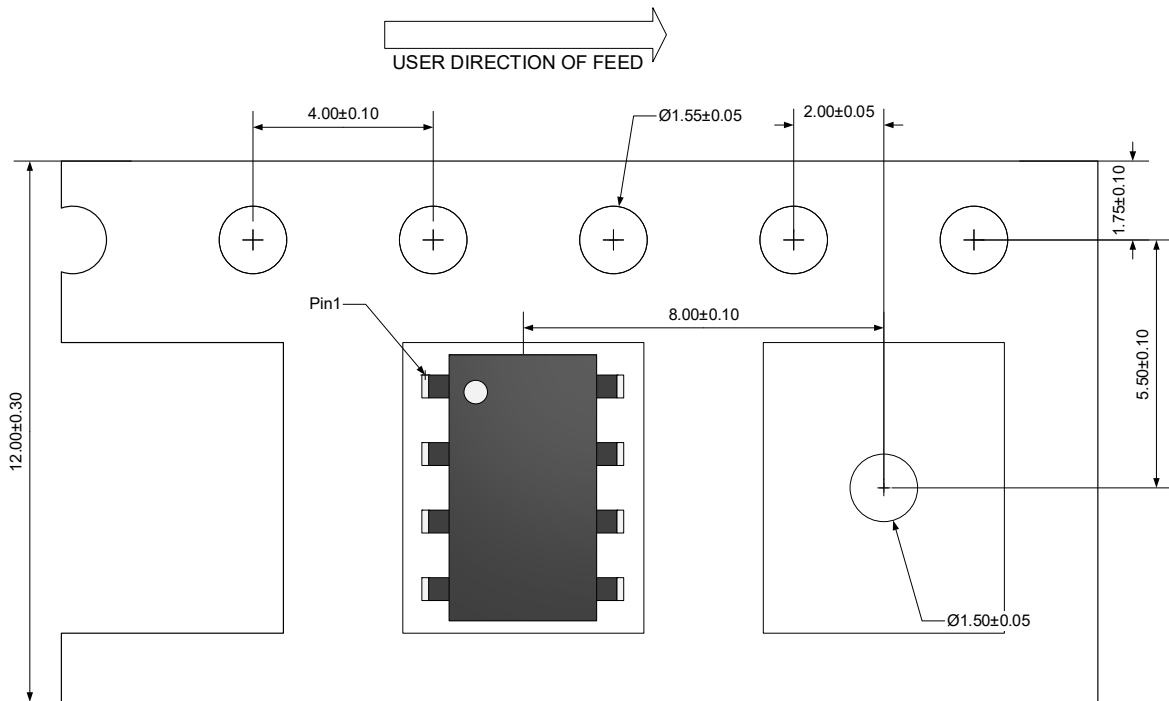


Unit: mm

Ordering information


Device	Package	Shipping
SLVU2.8-4	SOP-8	4000 / Tape & Reel

Load with information



Unit:mm


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