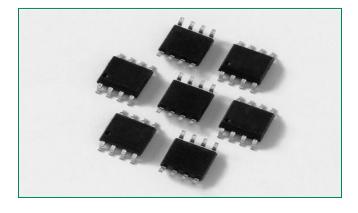


Po

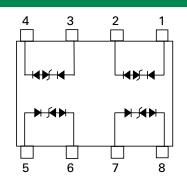
GREEN

RoHS

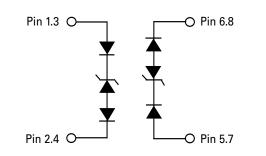
SLVU2.8-4 Series 2.8V 40A TVS Array



Pinout



Functional Block Diagram



Additional Information







Description

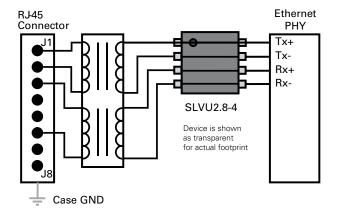
The SLVU2.8-4 was designed to protect low voltage, CMOS devices from ESD and lightning induced transients. There is a compensating diode in series with each low voltage TVS to present a low loading capacitance to the line being protected. These robust structures can safely absorb repetitive ESD strikes at ± 30 kV (contact discharge) per IEC 61000-4-2 standard and each structure can safely dissipate up to 40A (IEC 61000-4-5 2nd edition, t_p=8/20µs) with very low clamping voltages.

Features

- ESD, IEC 61000-4-2, ±30kV contact, ±30kV air
- EFT, IEC 61000-4-4, 40A (5/50ns)
- Lightning, IEC 61000-4-5 2nd edition, 40A (8/20µs)
- Low capacitance of 2pF per line
- Low leakage current of 1µA (MAX) at 2.8V
- SOIC-8 (JEDEC MO-012) pin configuration allows for simple flow-through layout
- RoHS Compliant and Lead Free
- Moisture Sensitivity Level
 (MSL-1)

Applications

- 10/100/1000 Ethernet
- WAN/LAN Equipment
- Switching Systems
- Desktops, Servers, and Notebooks
- Analog InputsBase Stations
- Application Example



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Electrical Characteristics (T _{OP} = 25°C)						
Parameter	Symbol	Test Conditions	Min	Тур	Max	Units
Reverse Standoff Voltage	V _{RWM}	I _R ≤1μA			2.8	V
Reverse Breakdown Voltage	V _{BR}	I _τ =2μA	3.0			V
Snap Back Voltage	V _{SB}	I _T =50mA	2.8			V
Reverse Leakage Current	I _{LEAK}	V _R =2.8V (Each Line)			1	μA
Clamping Voltage ¹	V _c	I _{PP} =5A, t _P =8/20μs (Each Line)		7.0	8.5	V
Clamping Voltage ¹	V _c	I _{PP} =24A, t _P =8/20μs (Each Line)		13.9	15.0	V
ESD Withstand Voltage ¹		IEC61000-4-2 (Contact)	±30			kV
	V _{ESD}	IEC61000-4-2 (Air)	±30			kV
Dynamic Resistance	R _{DYN}	(V _{C2} - V _{C1}) / (I _{PP2} - I _{PP1}) (Each Line)		0.4		Ω
Diode Capacitance ¹	CD	V _R =0V, f=1MHz (Each Line)		2.0	2.5	pF

Note: 1Parameter is guaranteed by design and/or device characterization.

Absolute Maximum Ratings					
Parameter	Rating	Units			
Peak Pulse Power (t _P =8/20µs)	600	W			
Peak Pulse Current (t _P =8/20µs)	40	А			
Operating Temperature	–40 to 125	°C			
Storage Temperature	–55 to 150	°C			

CAUTION: Stresses above those listed in "Absolute Maximum Ratings" may cause permanent damage to the device. This is a stress only rating and operation of the device at these or any other conditions above those indicated in the operational sections of this specification is not implied.

Figure 1: Capacitance vs. Reverse Voltage

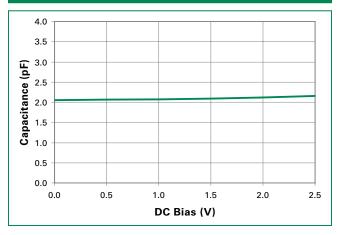


Figure 3: 8/20 µs Pulse Waveform

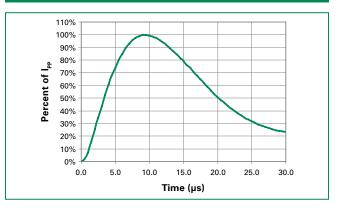
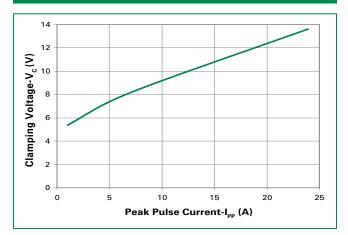


Figure 2: Clamping Voltage vs. I_{PP}





Product Characteristics			
Lead Plating	Matte Tin		
Lead Material	Copper Alloy		
Lead Coplanarity	0.0004 inches (0.102mm)		
Substitute Material	Silicon		
Body Material	V-0 per UL 94 Molded Epoxy		

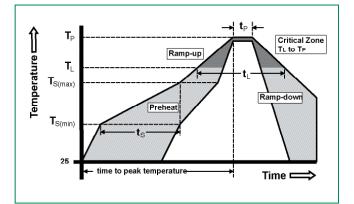
Notes

All dimensions are in millimeters
 Dimensions include solder plating.

Dimensions include solder plating.
 Dimensions are exclusive of mold flash & metal burr.
 All specifications comply to JEDEC SPEC MO-203 Issue A
 Blo is facing up for mold and facing down for trim/form, i.e. reverse trim/form.
 Package surface matte finish VDI 11-13.

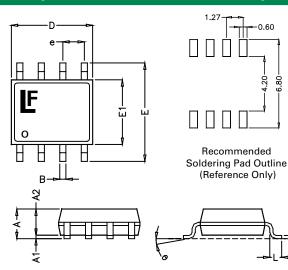
Soldering Parameters

Reflow Condition		Pb – Free assembly	
	-Temperature Min (T _{s(min)})	150°C	
Pre Heat	-Temperature Max (T _{s(max)})	200°C	
	-Time (min to max) (t _s)	60 – 180 secs	
Average ra (T _L) to pea	amp up rate (Liquidus) Temp k	5°C/second max	
T _{S(max)} to T	- Ramp-up Rate	5°C/second max	
Reflow	-Temperature (T _L) (Liquidus)	217°C	
Reliow	-Temperature (t _L)	60 – 150 seconds	
PeakTemp	erature (T _P)	260+0/-5 °C	
Time within 5°C of actual peak Temperature (t _p)		20 – 40 seconds	
Ramp-down Rate		5°C/second max	
Time 25°C to peak Temperature (T _P)		8 minutes Max.	
Do not exceed		260°C	



Package Dimensions – Mechanical Drawings and Recommended Solder Pad Outline

GÅUQE FLÅNE

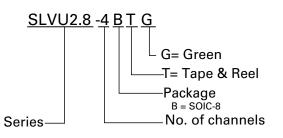


Package	SOIC-8				
Pins	8				
JEDEC	MS-012				
	Millin	netres	Inches		
	Min	Max	Min	Max	
Α	1.35	1.75	0.053	0.069	
A1	0.10	0.25	0.004	0.010	
A2	1.25	1.65	0.050	0.065	
В	0.31	0.51	0.012	0.020	
С	0.17	0.25	0.007	0.010	
D	4.80	5.00	0.189	0.197	
E	5.80	6.20	0.228	0.244	
E1	3.80	4.00	0.150	0.157	
е	1.27	BSC	0.050	BSC	
L	0.40	1.27	0.016	0.050	

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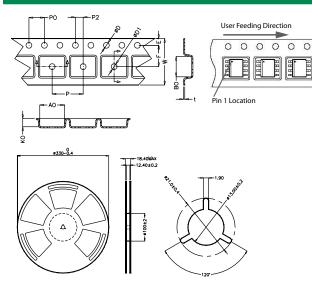


Part Numbering System



Ordering Information					
Part Number	Package	Marking	Min. Order Qty.		
SLVU2.8-4BTG	SOIC-8	U2.8-4	2500		

Embossed Carrier Tape & Reel Specification - SOIC Package



	Millin	netres	Inches		
Symbol	Min	Max	Min	Max	
E	1.65	1.85	0.065	0.073	
F	5.4	5.6	0.213	0.22	
P2	1.9	2.1	0.075	0.083	
D	1.5	1.6	0.059	0.063	
D1	1.50	Min	0.059 Min		
P0	3.9	4.1	0.154	0.161	
10P0	40.0 ± 0.20		1.574 ± 0.008		
w	11.9	12.1	0.468	0.476	
Р	7.9	8.1	0.311	0.319	
A0	6.3	6.5	0.248	0.256	
B0	5.1	5.3	0.2	0.209	
К0	2	2.2	0.079	0.087	
t	0.30 =	± 0.05	0.012 ±	± 0.002	

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