

## Description

The ASLxxCU series low capacitance transient voltage suppressor arrays, designed to protect applications such as portable electronics and SMART phones. This series is available in bidirectional configurations and is rated at 300 Watts for an 8/20 $\mu$ s waveshape. This series offers a low capacitance and low leakage current in a miniature SOD323 package.



## Mechanical Characteristics

- ◆ SOD323
- ◆ ROHS/ Compliant
- ◆ Halogen free
- ◆ Molding compound flammability rating: UL 94V-0
- ◆ Marking: Part number
- ◆ Packing: Tape and Reel per EIA 481


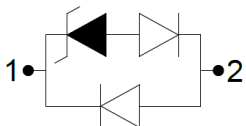
## Features

- ◆ IEC 61000-4-2 (ESD)
  - $\pm$ 30kV Contact Discharge
  - $\pm$ 30kV Air Discharge
- ◆ IEC 61000-4-4 EFT Protection
  - 40A (5/50ns)
- ◆ Halogen free and RoHS compliant
- ◆ 300W Peak pulse Power (8/20us)
- ◆ Protects one directional I/O line
- ◆ Transient protection for high-speed data lines
- ◆ Low clamping voltage
- ◆ Low leakage current
- ◆ AEC-Q101 qualified

## Applications

- ◆ Cell Phone Handsets and Accessories
- ◆ Microprocessor based equipment
- ◆ Personal Digital Assistants
- ◆ Notebooks / Desktops / Servers
- ◆ Portable Instrumentation
- ◆ Peripherals & Pagers

### Dimensions and Pin Configuration

Pin	Name	Description	Outline	Circuit Diagram
1	IO	Connect to IO		
2	GND	Connect to GND		

### Ordering Information

Part Number	Package	Material	Packing	Quantity per reel	Flammability Rating	Reel Size	
ASLxxCU	SOD323	Halogen free	Tape & Reel	3,000 PCS	UL 94V-0	7 inches	
Marking for the ASLxxCU series							
V <sub>RWM</sub>	3.3V	5V	8V	12V	15V	24V	-
Marking	S3	S5	S8	S12	S15	S24	-

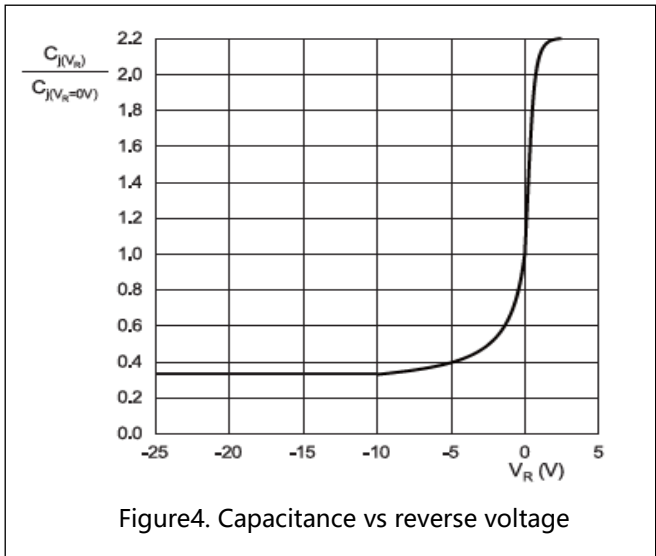
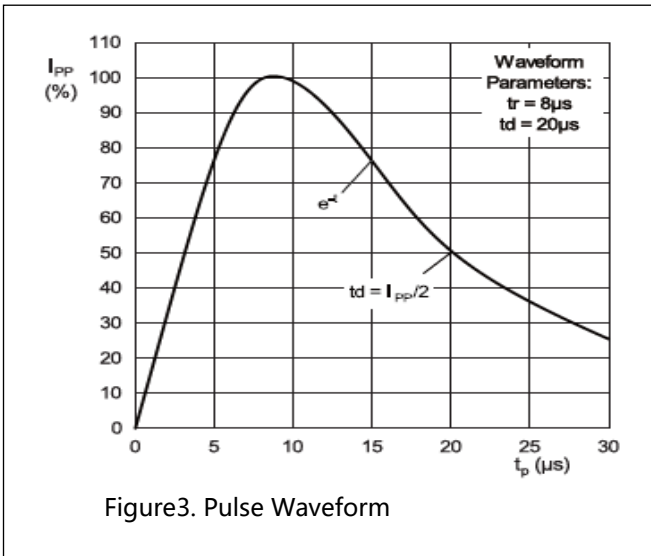
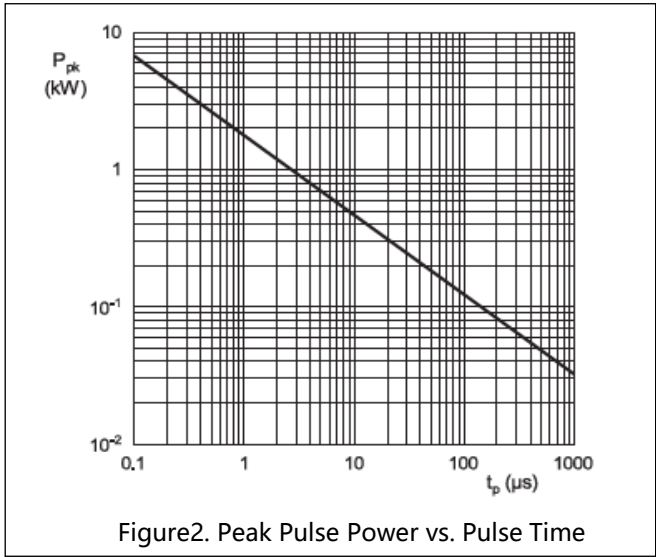
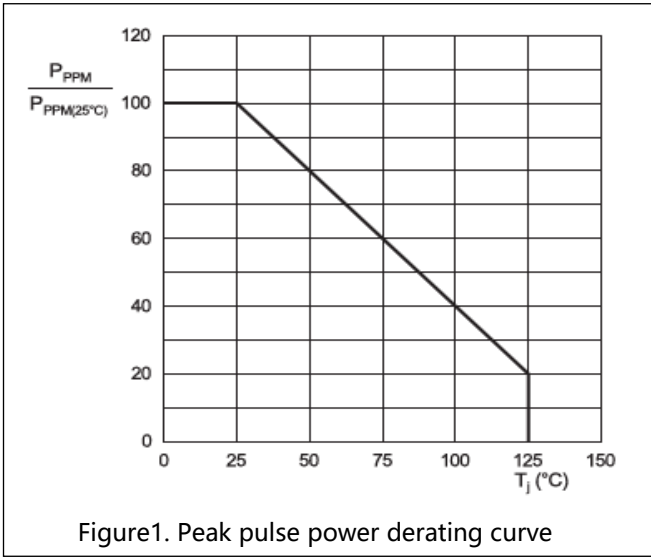
### Absolute Maximum Ratings (T<sub>A</sub>=25°C unless otherwise specified)

Parameters	Symbol	Min.	Max.	Unit
Peak pulse power (tp=8/20us)@25°C	P <sub>pk</sub>	-	300	W
ESD (IEC61000-4-2 air discharge) @25°C	V <sub>ESD</sub>	-	±30	kV
ESD (IEC61000-4-2 contact discharge) @25°C	V <sub>ESD</sub>	-	±30	kV
Junction temperature	T <sub>J</sub>	-	125	°C
Operating temperature	T <sub>OP</sub>	-40	125	°C
Storage temperature	T <sub>STG</sub>	-55	150	°C
Lead temperature	T <sub>L</sub>	-	260	°C

### Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise specified)

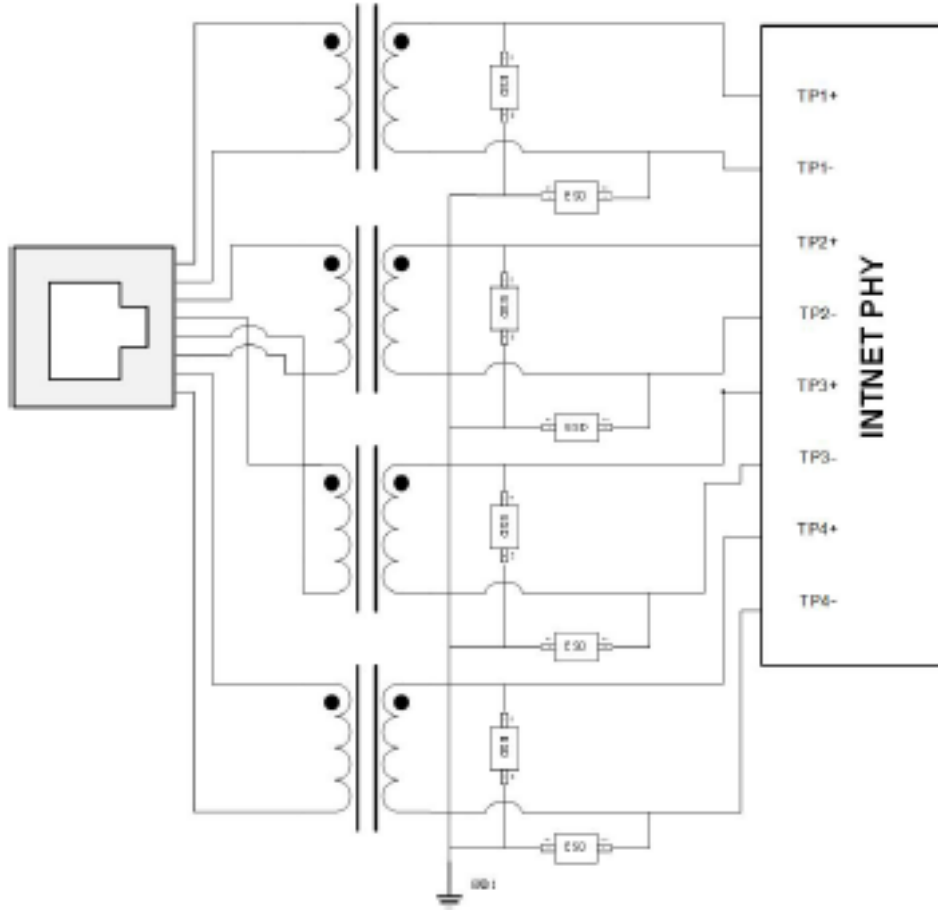
Part Number	VRWM (max.)	VBR (min.)	VCL@I=1A (max.)	IPP (max.)	VCL@I=IPP (max.)	IR (max.)	CJ (typ.)
	(V)	(V)	(V)	(A)	(V)	(uA)	(pF)
ASL03CU	3.3	4.0	8.5	17.0	20	1.0	0.8
ASL05CU	5.0	6.0	9.5	15.0	21	1.0	0.8
ASL08CU	8.0	8.5	12.0	12.0	25	1.0	0.8
ASL12CU	12.0	13.3	19.0	7.0	35	1.0	0.8
ASL15CU	15.0	16.5	24.0	5.0	45	1.0	0.8
ASL24CU	24.0	26.0	34.0	4.0	55	1.0	0.8

Typical Performance Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise Specified)

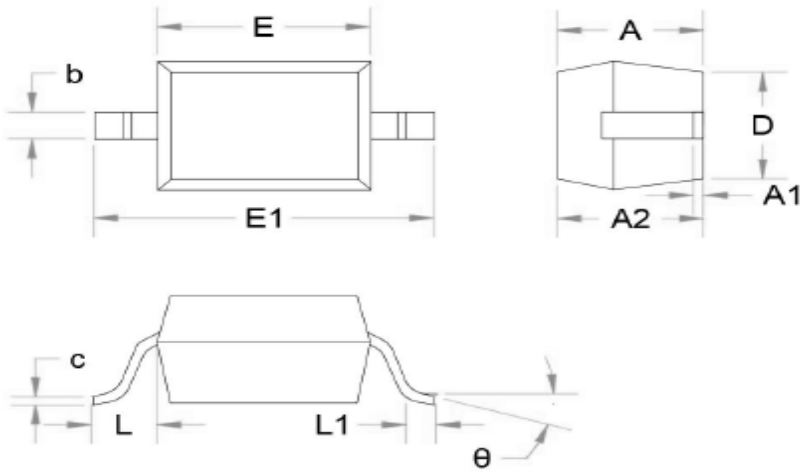


Applications Information

Typical Interface 1G Interface Application



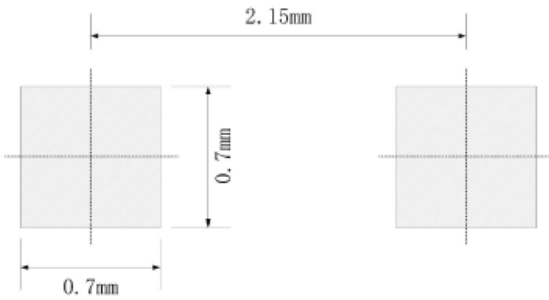
Package Outline Drawing



Units in millimeters

Symbol	Dimensions in Millimeters		Dimensions in Inches	
	MIN.	MAX.	MIN.	MAX.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.950	0.031	0.037
b	0.250	0.350	0.010	0.014
C	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.400	2.750	0.094	0.108
L	0.475REF		0.019REF	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

Recommended Land Pattern



Note:

1. Controlling dimension: in millimeters
2. General tolerance:  $\pm 0.05\text{mm}$
3. The pad layout is for reference only

Revision history of Specification

Version	Change Items	Effective Date
1.0	Initial Release	13-Aug-2021