

Description

The ASLxxE2B Series are ultra low capacitance transient voltage suppressor arrays, designed to protect applications such as portable electronics and SMART phones. This series is available bidirectional configurations and is rated at 350 Watts for an 8/20 μ s wave shape. At higher operating frequencies or faster edge rates, insertion loss and signal integrity are a major concern. This series offers a ultra low capacitance and low leakage current in a miniature SOT-23 package.



Mechanical Characteristics

- ◆ SOT23
- ◆ ROHS/ Compliant
- ◆ Halogen free
- ◆ Molding compound flammability rating: UL 94V-0
- ◆ Marking: Part number
- ◆ Packing: Tape and Reel per EIA 481

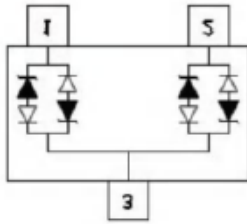
Features

- ◆ IEC 61000-4-2 (ESD)
 - \pm 25kV Contact Discharge
 - \pm 25kV Air Discharge
- ◆ 300W peak pulse power (tp=8/20us)
- ◆ IEC 61000-4-4 EFT Protection
 - 40A (5/50ns)
- ◆ Halogen free and RoHS compliant
- ◆ Protects one directional I/O line
- ◆ Transient protection for high-speed data lines
- ◆ Low clamping current
- ◆ AEC-Q101 qualified

Applications

- ◆ Ethernet 10/100/1000 Base T
- ◆ SMART Phones
- ◆ Handheld - Wireless Systems
- ◆ USB Interface

Pin Configuration



Ordering Information

Part Number	Package	Material	Packing	Reel Size
ASLxxE2B	SOT23	Halogen free	3000/Tape & Reel	7 inch

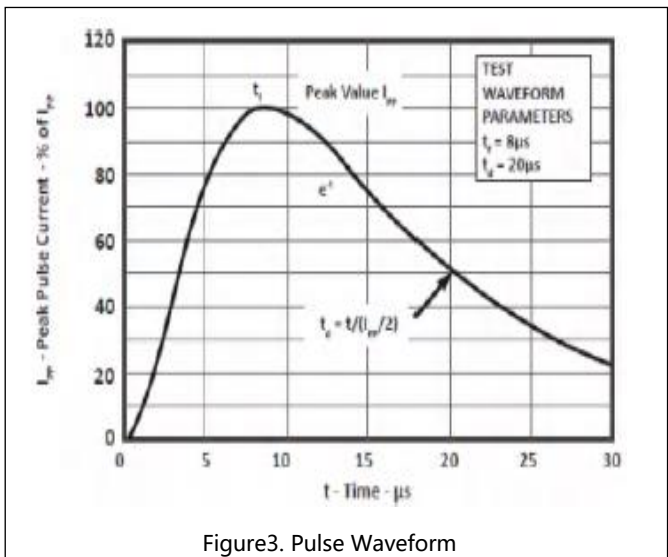
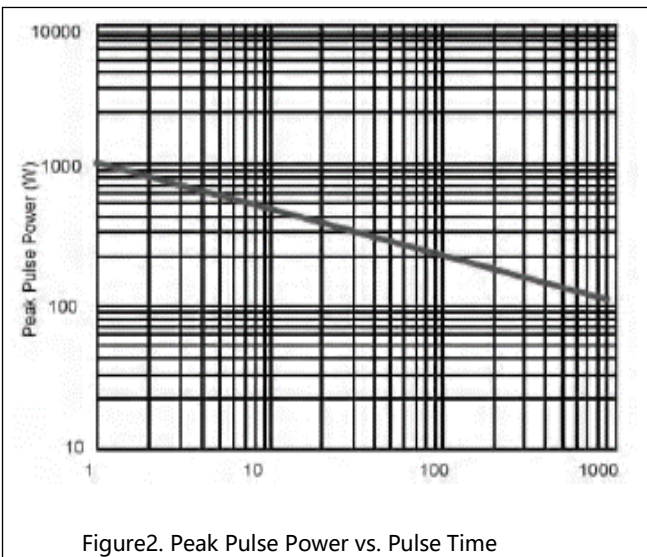
Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameters	Symbol	Min.	Max.	Unit
Peak pulse power ($t_p=8/20\mu\text{s}$)@25°C	P_{pk}	-	300	W
ESD (IEC61000-4-2 air discharge) @25°C	V_{ESD}	-	± 25	kV
ESD (IEC61000-4-2 contact discharge) @25°C	V_{ESD}	-	± 25	kV
Junction temperature	T_J	-	125	°C
Operating temperature	T_{OP}	-55	125	°C
Storage temperature	T_{STG}	-55	150	°C
Lead temperature	T_L	-	260	°C

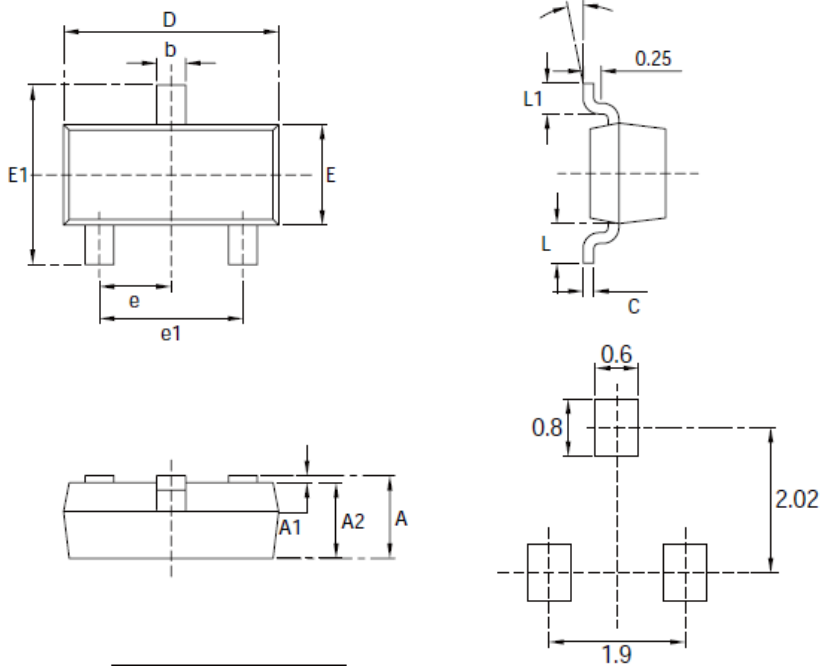
Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

Part Number	Rated Stand-off Voltage V_{wm} (V)	Minimum Breakdown Voltage@ 1mA $V(BR)$ (V)	Maximum Clamping Voltage@ $I_{PP} = 1A$ $V_C(V)$	Maximum IPP $I_{PPmax}(A)$	Maximum Clamping Voltage@ Maximum IPP $V_C(V)$	Maximum Leakage Current @VWM $I_D(\mu A)$	Typical Capacitance@0V, 1MHz $C_o(pF)$
ASL03E2B	3.3	4.5	8.5	19.0	20.0	1.0	0.8
ASL05E2B	5.0	6.0	9.5	9.5	21.0	1.0	0.8
ASL08E28	8.0	8.5	12.0	14.0	25.0	1.0	0.8
ASL12E2B	12.0	13.3	19.0	7.0	35	1.0	0.8
ASL15E2B	15.0	16.5	24	6.0	45	1.0	0.8
ASL24E2B	24.0	26.0	34	4.0	55	1.0	0.8

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



Package Outline Drawing



Units in millimeters

SYMBOL	DIMENSIONS	
	MIN	MAX
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
	0°	8°

NOTE:

1. Controlling dimension: in millimeters.
2. General tolerance: ±0.05mm.
3. The pad layout is for reference purposes only.



Revision history of Specification

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