



PROTECTION PRODUCTS

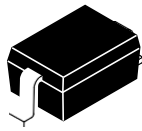
Feature:

- 400 Watts Peak Pulse Power per Line (tp=8/20μs)
- Protects two bi-directional I/O lines
- Low clamping voltage
- Working voltages : 36V
- Low leakage current
- IEC61000-4-2 (ESD) ±15kV (air), ±8 kV (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5 (Lighting) 5A (8/20μs)

Application:

- RS-232, RS-422 & RS-423 Data Lines
- Audio/Video Inputs
- Wireless Network Systems
- Microprocessor Based Equipment
- Medical Sensors
- Notebook Computers

Circuit Diagram & Pin Configuration:



SOD-323



DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
ESD3D36VB1S401J	2N	3000/Tape&Reel



Ordering Information per line@25°C(unless otherwise specified)

Parameter	Symbol	Rating	Unit
Peak pulse power (tp = 8/20μs)	P _{pk}	400	W
ESD Protection – Contact Discharge, per IEC 61000-4-2	V _{ESD_CONTACT}	±8	kV
ESD Protection – Air Discharge, per IEC 61000-4-2	V _{ESD_AIR}	±15	
Junction temperature	T _J	125	°C
Operating temperature	T _{OP}	-40~85	°C
Lead temperature	T _L	260	°C
Storage temperature	T _{STG}	-55~150	°C

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Working Voltage	V _{RWM}	—	—	36	V	
Reverse Breakdown Voltage	V _{BR}	40	—	—	V	I _R = 1mA,
Reverse Leakage Current	I _R	—	—	1	μA	V _R = 36V,
Clamping Voltage	V _C	—	—	65	V	I _{PP} = 1.0A, 8/20μs,
Clamping Voltage	V _C	—	—	75	V	I _{PP} = 5.0A, 8/20μs,
Junction Capacitance	C _J	—	—	25	pF	V _R = 0V, f = 1MHz,

Note: Electrical parameters are only for die, performance may alter after assembly.



Typical Characteristics

Fig 1. 8/20 ms pulse waveform according to IEC 61000-4-5

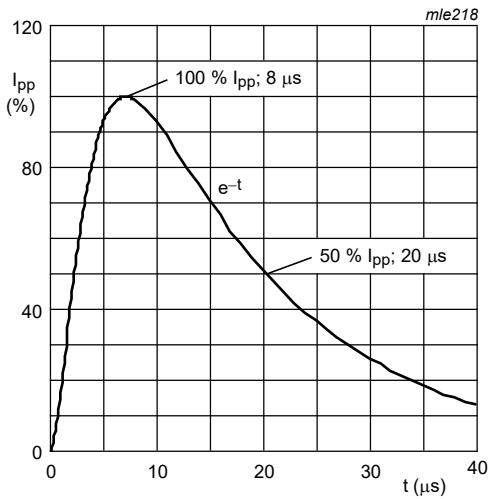
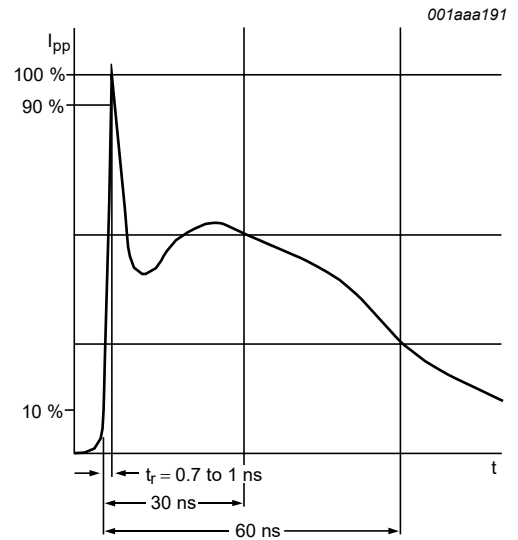
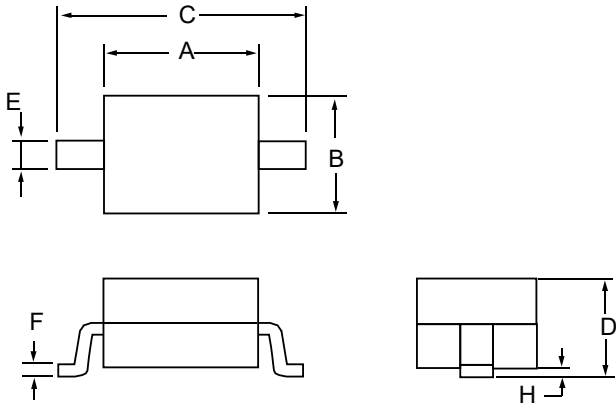


Fig 2. ElectroStatic Discharge (ESD) pulse waveform according to IEC 61000-4-2



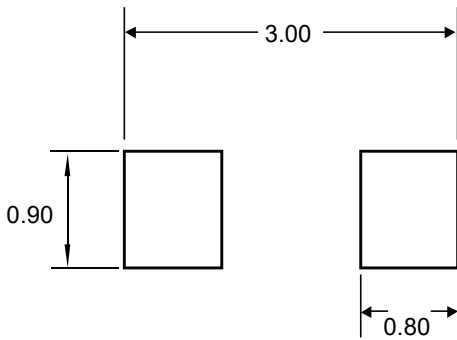


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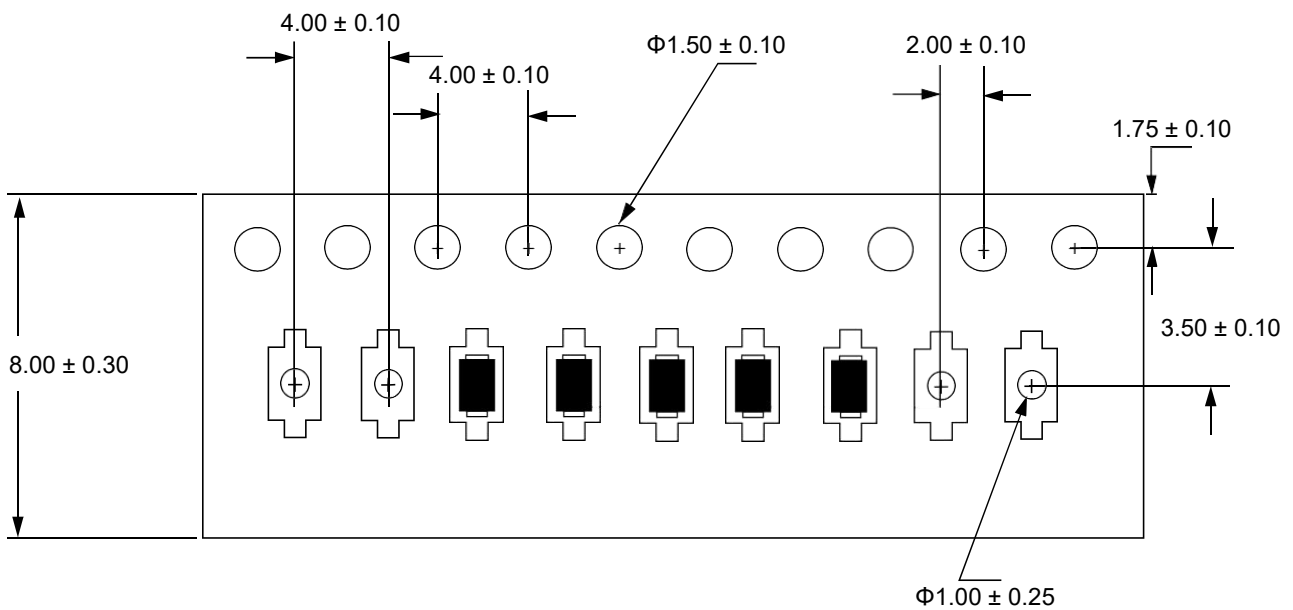
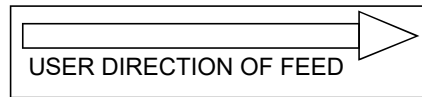


Dim	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.063	0.075	1.60	1.90
B	0.045	0.057	1.15	1.45
C	0.090	0.106	2.30	2.70
D	0.031	0.043	0.80	1.10
E	0.010	0.01	0.25	0.40
F	0.004	0.007	0.09	0.18
H	0.000	0.004	0.00	0.10

Suggested PCB Layout



Unit:mm



Unit: mm



NOTICE

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